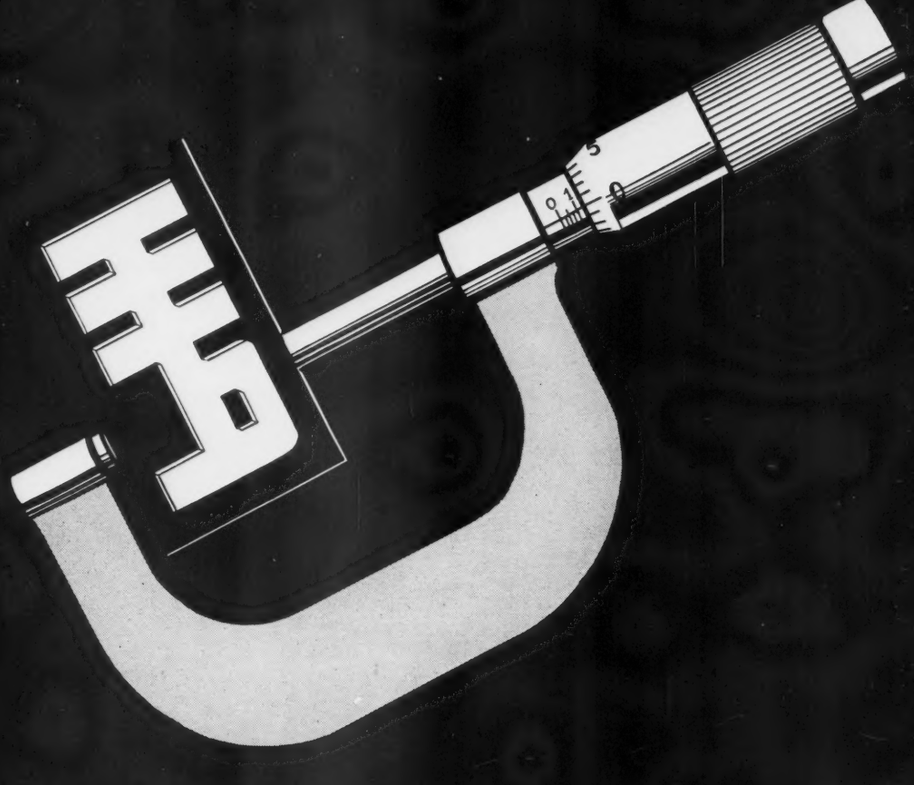
Printing Equipment



"the boss REALLY GOT something from Hammond
when he bought our Hammond EasyKaster "8". We are making better and more accurate casts—turning them out faster than ever before. In 45 minutes our metal is hot and we never have to stop for remelts. The 800 lb. capacity insulated melting pot keeps the metal sizzling and the operator cool."
HAMMOND EASYKASTER 8
Hammond EK8-P. Full page, automatic-locking, flat caster. Available also without melting pot.

● **Without obligation, write for circular, prices, terms, trade-in allowance and nearby users**

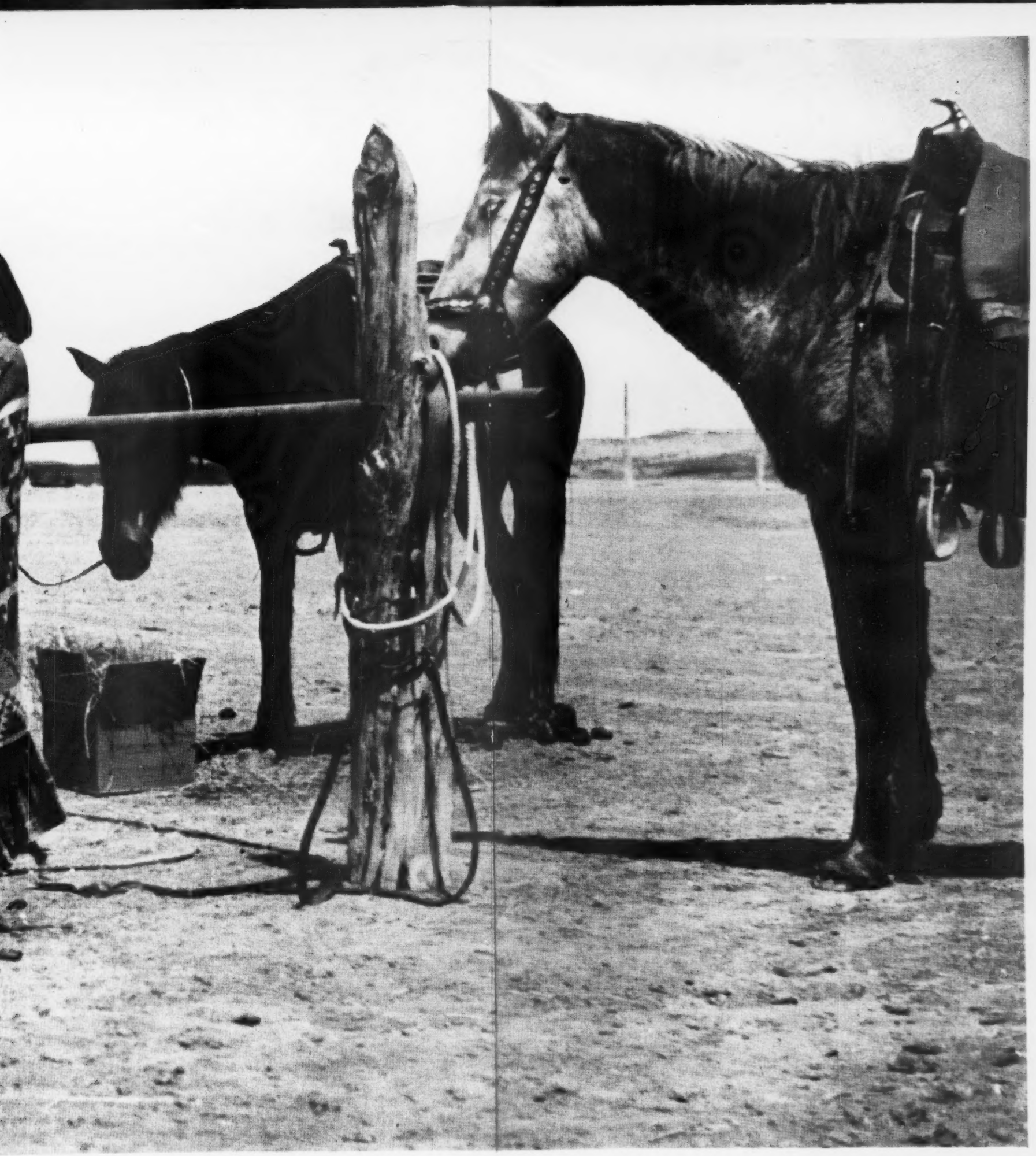
★ ★ ★ **Hammond Machinery Builders** INCORPORATED
KALAMAZOO, MICHIGAN, U.S.A. ★ ★ ★
1604 DOUGLAS AVENUE

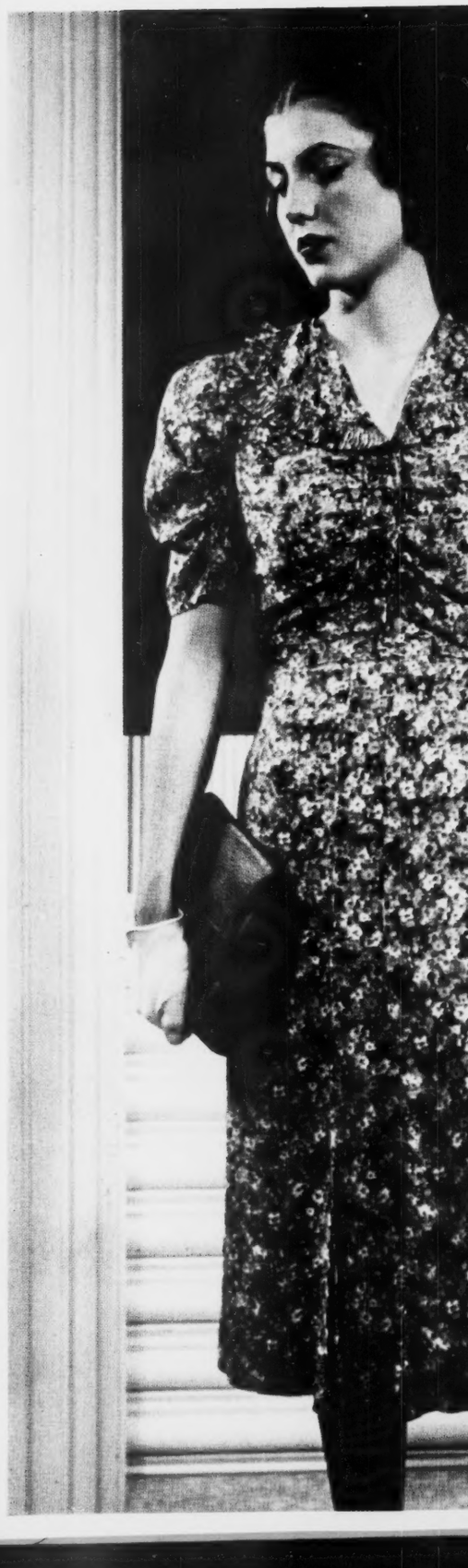
Right!

for fine QUALITY printing

BETTER NO 2KELLY

BETTER NO.2 KELLY





4-COLOR PROCESS PLATES

"Boating Scene"

"Girl in Print Dress"

COURTESY OF HOLLAND ENGRAVING COMPANY
KANSAS CITY, MISSOURI

•

"Indian Squaws and Ponies"

"Indian Girl with Pottery" (SMALL)

"Indian Girl with Pottery" (LARGE)

COURTESY OF TWA—HOLLAND ENGRAVING COMPANY
KANSAS CITY, MISSOURI

•

"Bathing Girl" by Petty

COURTESY OF ESQUIRE MAGAZINE
CHICAGO, ILLINOIS

Rig

for fast QUANT

EXTRA FORM SIZE

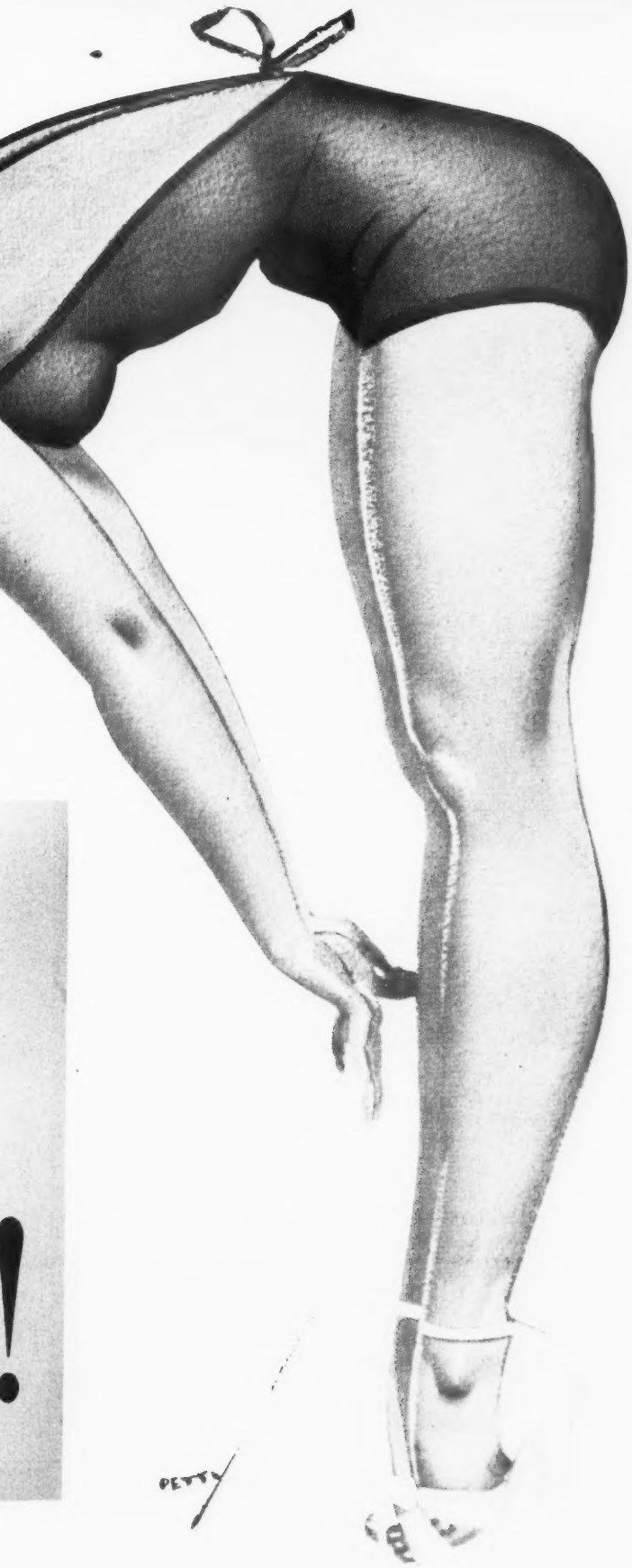
No tricks in layout or presswork. This oversize sheet, 24x35", was printed on a Better No. 2 Kelly. The red line marks the standard form size, $21\frac{3}{8}$x$32\frac{3}{4}$". Within that area you can print solids, halftones and type provided your paper, ink and pressmen are up to the usual standards. Everything below the red line is additional coverage for type forms. Note that you can print between the grippers.

ght!

NTITY printing

Right?

Right!



The BETTER NO. 2 KELLY

Just the right size

It prints:
a standard sheet
22½x35"
an oversize sheet
24x35"

Noted for its versatility of job sizes and paper stock in printing fine quality or fast quantity work. A dependable press . . . for long and short runs.

Printed on the Better No. 2 Kelly with auxiliary roller, without offsetting, thanks to ATF Non-Offset Guns.

EXTRA FORM SIZE

The maximum coverage of the Better No. 2 Kelly is 21⅜" from the deadline with two form rollers . . . add 5/16" for coverage from the gripper edge. The Better No. 2 Kelly actually covers a 24x35" oversize sheet with auxiliary distributor. This extra coverage is an advantage on type forms, and everything printed below the red line is a plus-value you receive with the No. 2 Kelly.

Branch Offices

LOS ANGELES, CAL. . *222 South Los Angeles Street*
MILWAUKEE, WIS. . . *737 North Van Buren Street*
MINNEAPOLIS, MINN. . . . *421 Fourth Street, South*
NEW YORK, N. Y. . . . *104 East Twenty-fifth Street*
PHILADELPHIA, PA. . *Thirteenth and Cherry Streets*
PITTSBURGH, PA. . . . . *405 Penn Avenue*
PORTLAND, OREGON . . *116 Southwest Oak Street*
ST. LOUIS, MISSOURI . . . . . *2135 Pine Street*
SAN FRANCISCO, CAL. . . . . *500 Howard Street*
SEATTLE, WASH. . . *Western Avenue and Columbia*
WASHINGTON, D. C. . . . *1224 H Street, Northwest*

AMERICAN TYPE

YPE FOUNDERS SALES CORPORATION

AMERICAN TYPE FOUNDERS SALES C

S CORPORATION

Branch Offices

ATLANTA, GEORGIA . *223 Nelson Street, Southwest*
BALTIMORE, MD. . . . . *109 South Hanover Street*
BOSTON, MASS. . . . . *170 Atlantic Avenue*
BUFFALO, NEW YORK . . . . *327 Washington Street*
CHICAGO, ILLINOIS . . . . . *519 West Monroe Street*
CINCINNATI, OHIO . . . *Sixth and Sycamore Streets*
CLEVELAND, OHIO . . . . . *1231 Superior Avenue*
DALLAS, TEXAS . . . . . *600 South Akard Street*
DENVER, COLORADO . . . . . *1351 Stout Street*
DES MOINES, IOWA . . . . . *924 Grand Avenue*
DETROIT, MICHIGAN . . . . *557 West Larned Street*
KANSAS CITY, MO. . . . . *934 Wyandotte Street*

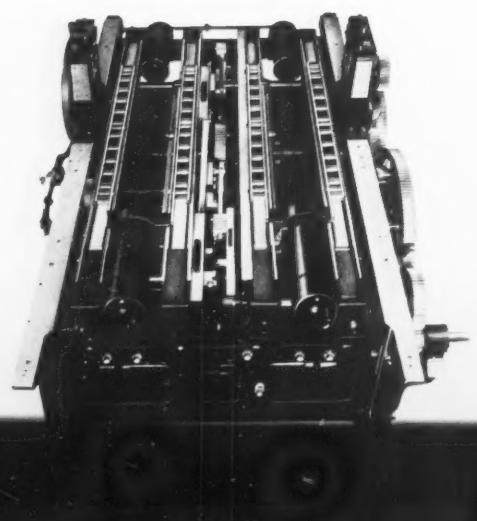
DISTRIBUTION

The Better No. 2 Kelly has the proved pyramid system of ink distribution with precision ink drum. A constant flow of well-worked ink is fed to the form rollers at all speeds of the press.

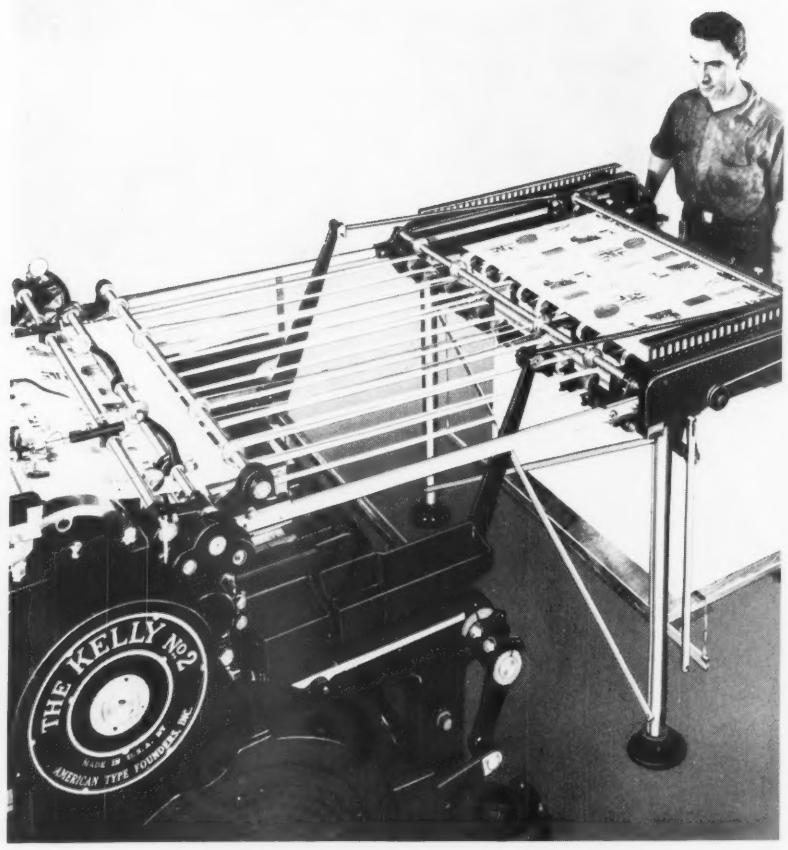
An auxiliary form roller with its own vibrator and rider provides additional distribution on largest sheet size, 24x 35". When abnormally heavy forms are run, automatic double rolling is available on the Better No. 2 Kelly in a few seconds . . . it's there *when* you need it.

●

STRENGTH AND RIGIDITY



THE PRINTER enjoys better quality



ACCESSIBILITY—Cutting time spent on makeready and wash-ups by your pressman is equal to a boost of production. Quicker get-away produces more work in less time, and makes more profit. These operations are reduced to extreme simplicity on the Better No. 2 Kelly. The form is easy to get at: the ink fountain is readily accessible: hanging the overlay is a simpler, quicker operation.

FEWER ADJUSTMENTS—There's more time for profitable production when less time is required for adjustments. Feeder, delivery, and fountain on the Better No. 2 Kelly require few adjustments. These are simple, easily accessible. A convenient "start-stop" station controls

YOU CAN PRINT BETWEEN THE GRIPPER

•

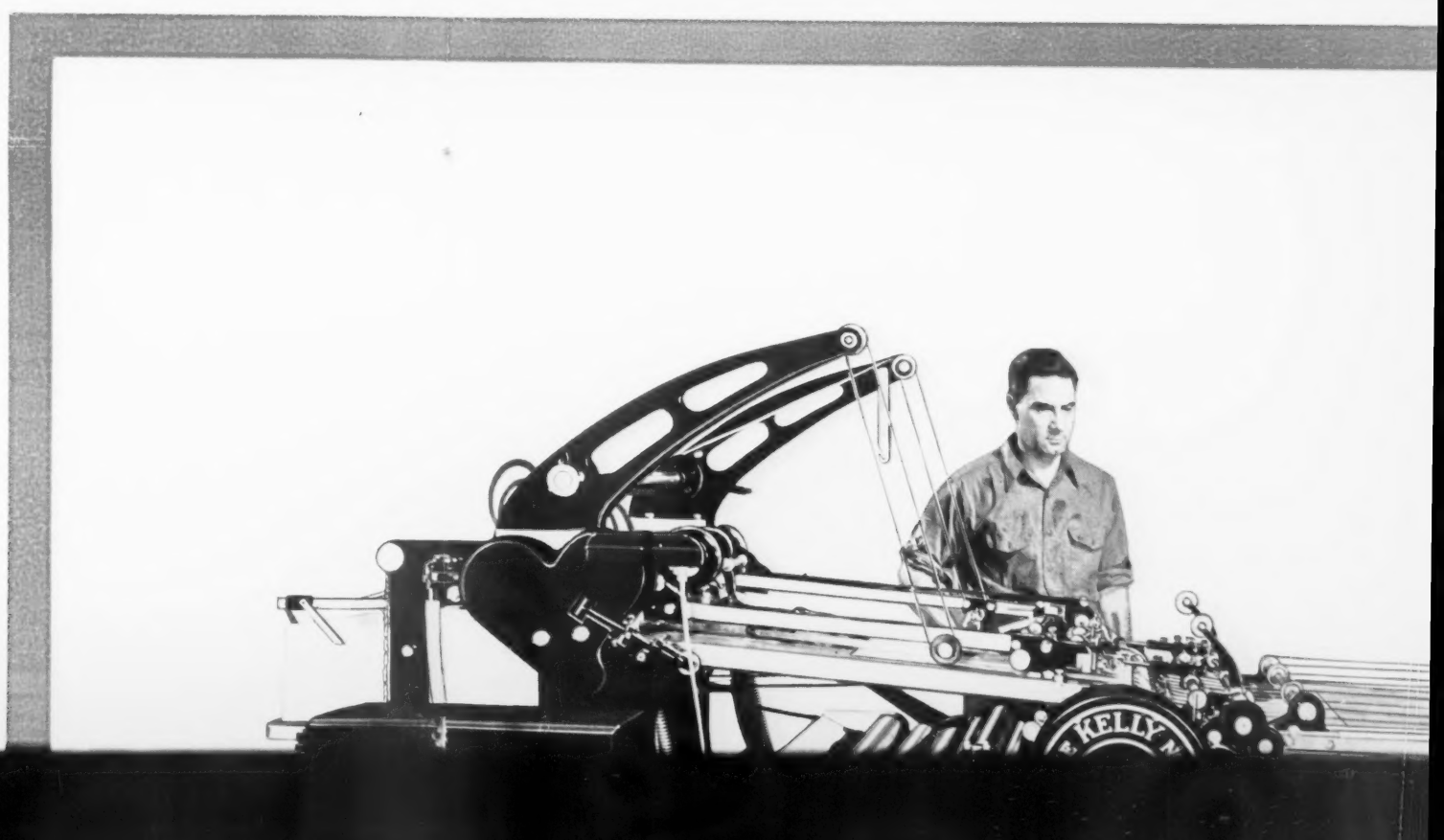
A Life-Saver
when you have a large job
that must bleed

The Printer Wins

BETTER NO. 2

Standard sheet size 22½x35 inches · Larg

This untrimmed press sheet produced under standard comme



YOU CAN PRINT BETWEEN THE GRIPPERS

•

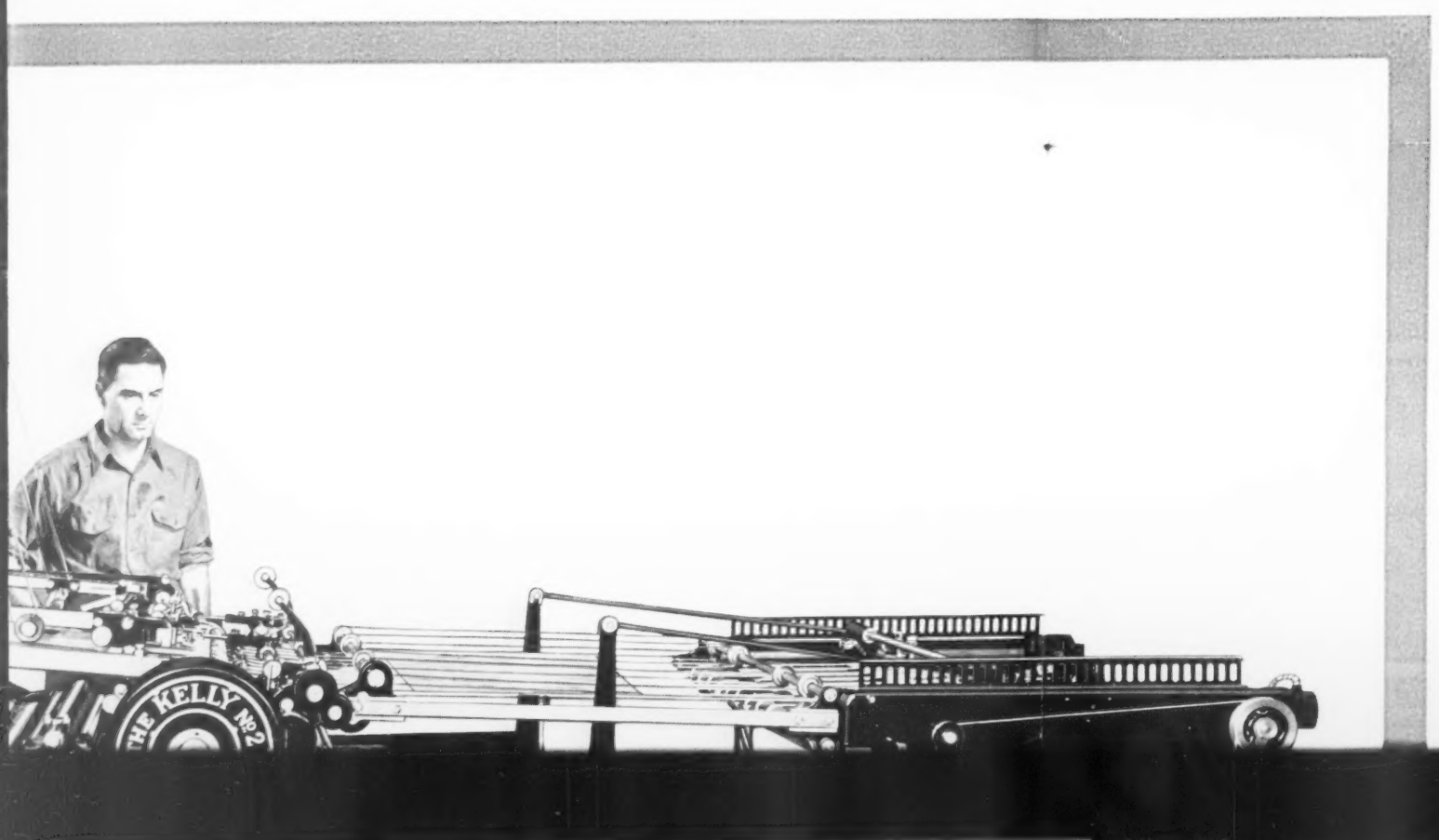
A Life-Saver
when you have a large job
that must bleed

r Wins...with the

NO. 2 KELLY

35 inches · Largest sheet size 24x35 inches

under standard commercial conditions on the Better No. 2 Kelly



THE PRINTER
avoids fuss and trouble

REGISTER—The great popularity of the Better No. 2 Kelly for color work results from its unfailingly accurate register. The simplest kind of adjustments provide complete control of sheets by your pressman at all speeds. The drop-guides, and simple pull-guide controlling side register, are adjustable while press is running; a sheet slow-down mechanism prevents sheets from rebounding at the drop-guides.

FEEDING—With positive-acting, suction-wheel type feeder your pressman can set his stock . . . thereafter give it little attention. Adjustments from one sheet size or weight to another are simply and easily made. The printer avoids production interruptions, even on onionskin to 6-ply

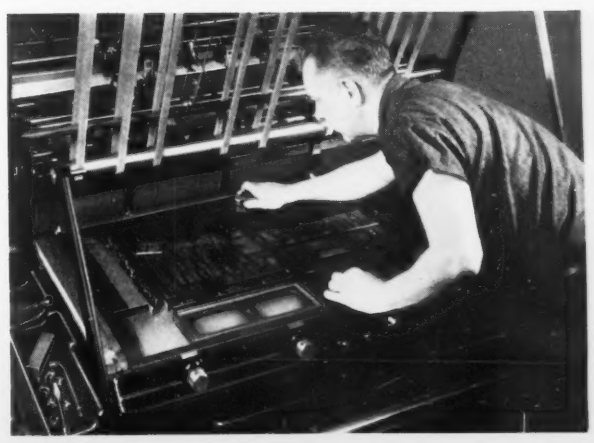
VERSATILITY

A majority of commercial job sizes fall naturally in the range of the No. 2 Kelly. From its largest sheet, 24x35", to the smallest, 8½x11", the Kelly takes run-of-the-hook jobs without apology.

It feeds and prints the entire range of commercial paper stock from onion-skin to 6-ply cardboard . . . 36 standard sizes of paper stocks as supplied by paper jobber, without cutting before going to press. An ample range of job sizes, plus paper stock versatility.

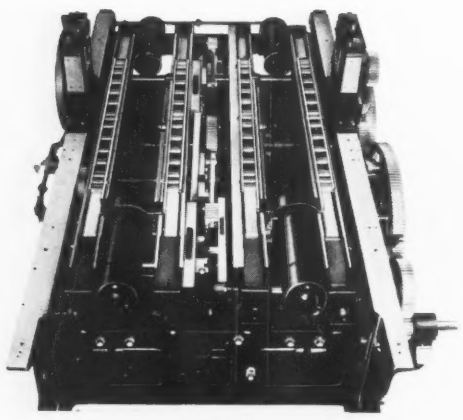
●

PRESSMEN PREFER IT



This untrimmed press

STRENGTH AND RIGIDITY



More than adequate strength and wear-resistance are built into the Better No. 2 Kelly, from the ground up. Four rugged tracks, two directly under cylinder bearers where pressure is concentrated, support the heavy bed. This rigidity insures a powerful, even impression. A form made ready on any Kelly *stays* made ready, as its impressional strength is more than equal to the need of the extreme job. *"The press that never wears out,"* a description often applied to the Kelly, is a result of the fact that many of the oldest Kellys are still at work today.

EXTRA FORM SIZE

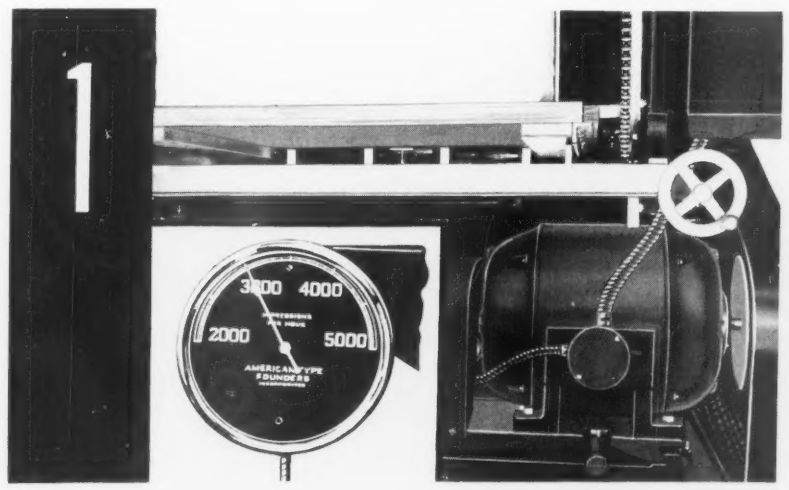
No tricks in layout or presswork. This oversize sheet, 24x35", was printed on a Better No. 2 Kelly. The red line marks the standard form size, $21\frac{3}{8}$x$32\frac{3}{4}$". Within that area you can print solids, halftones and type provided your paper, ink and pressmen are up to the usual standards. Everything below the red line is additional coverage for type forms. Note that you can print between the grippers.

ACCESSIBILITY—Cutting time spent on makeready and wash-ups by your pressman is equal to a boost of production. Quicker get-away produces more work in less time, and makes more profit. These operations are reduced to extreme simplicity on the Better No. 2 Kelly. The form is easy to get at; the ink fountain is readily accessible; hanging the overlay is a simpler, quicker operation.

FEWER ADJUSTMENTS—There's more time for profitable production when less time is required for adjustments. Feeder, delivery, and fountain on the Better No. 2 Kelly require few adjustments. These are simple, easily accessible. A convenient "start-stop" station controls the motor, with an extra stop button handy at the delivery.

ONE MAKEREADY—Only "*one* makeready" is necessary on the Better No. 2 Kelly. Once set, it stays for the full length of the run, another advantage of the *extra impressional strength* of the Better No. 2 Kelly.

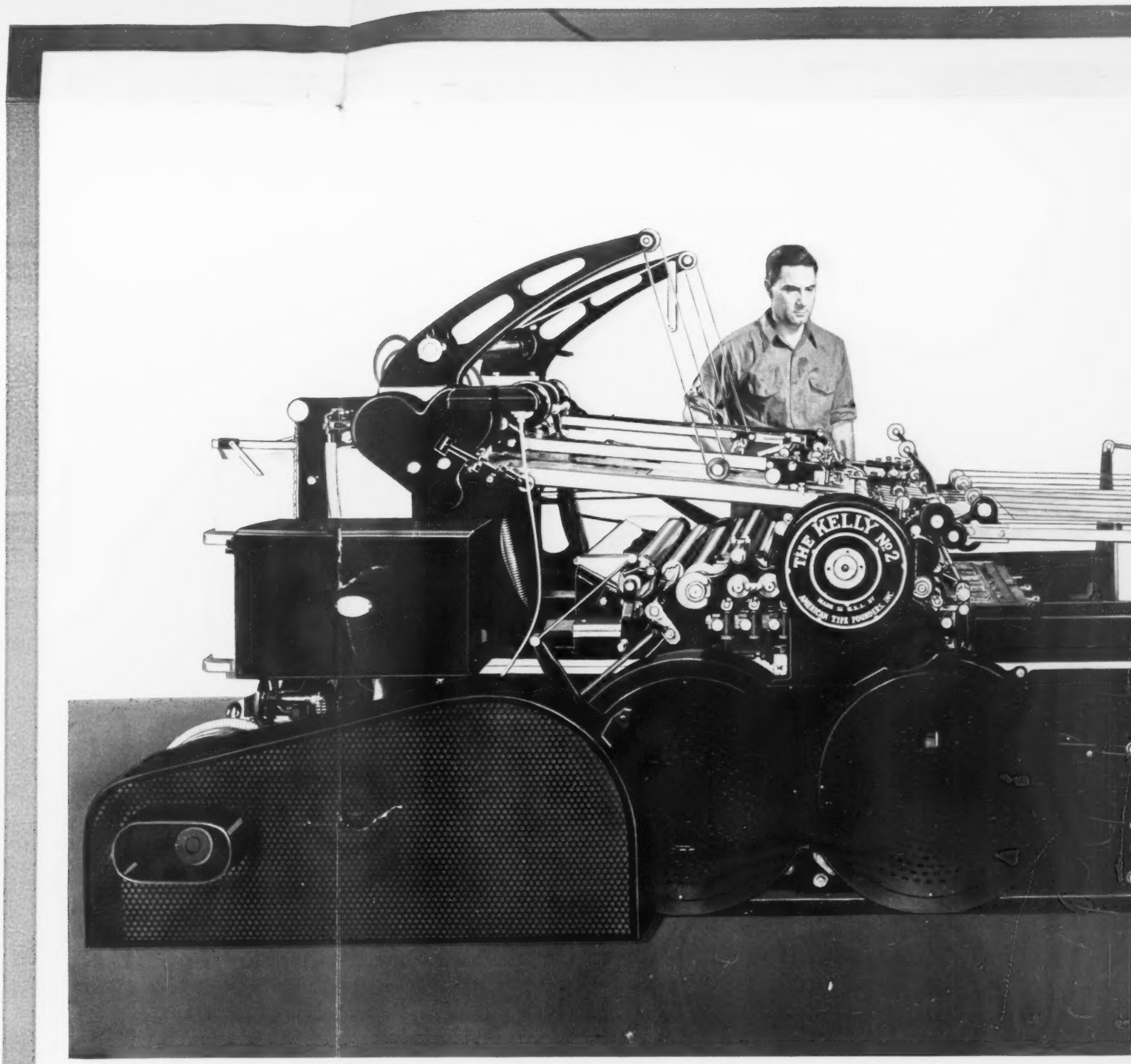
FULL VIEW—Your pressman is never in doubt about the job he is running on the Better No. 2 Kelly. He has a full view of the printed sheet, face up, from the time it leaves the feeder until it is covered on the delivery pile.

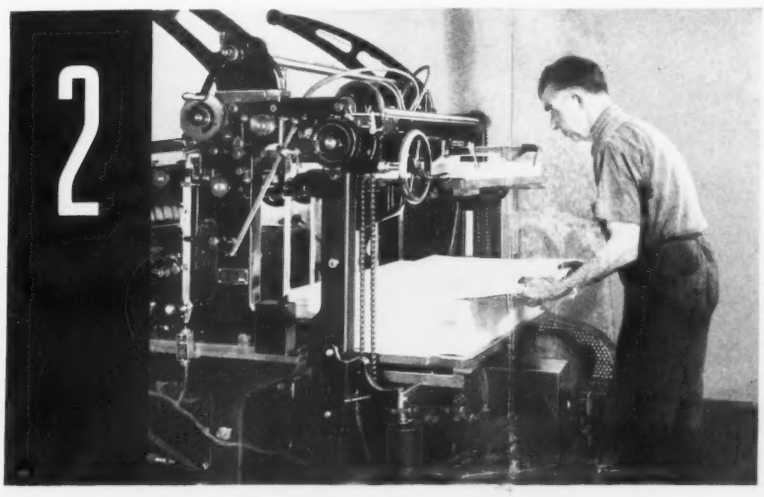


DELICATE SPEED CHANGES

The slightest changes of press speed can be made on the Better No. 2 Kelly without stopping the press, and without the necessity for finding the right step. A convenient handwheel which controls the variable speed pulley does the trick. Turn it until the desired rate of press speed is attained, and it's all set. A dial speed-indicator is included.

This unthinned press





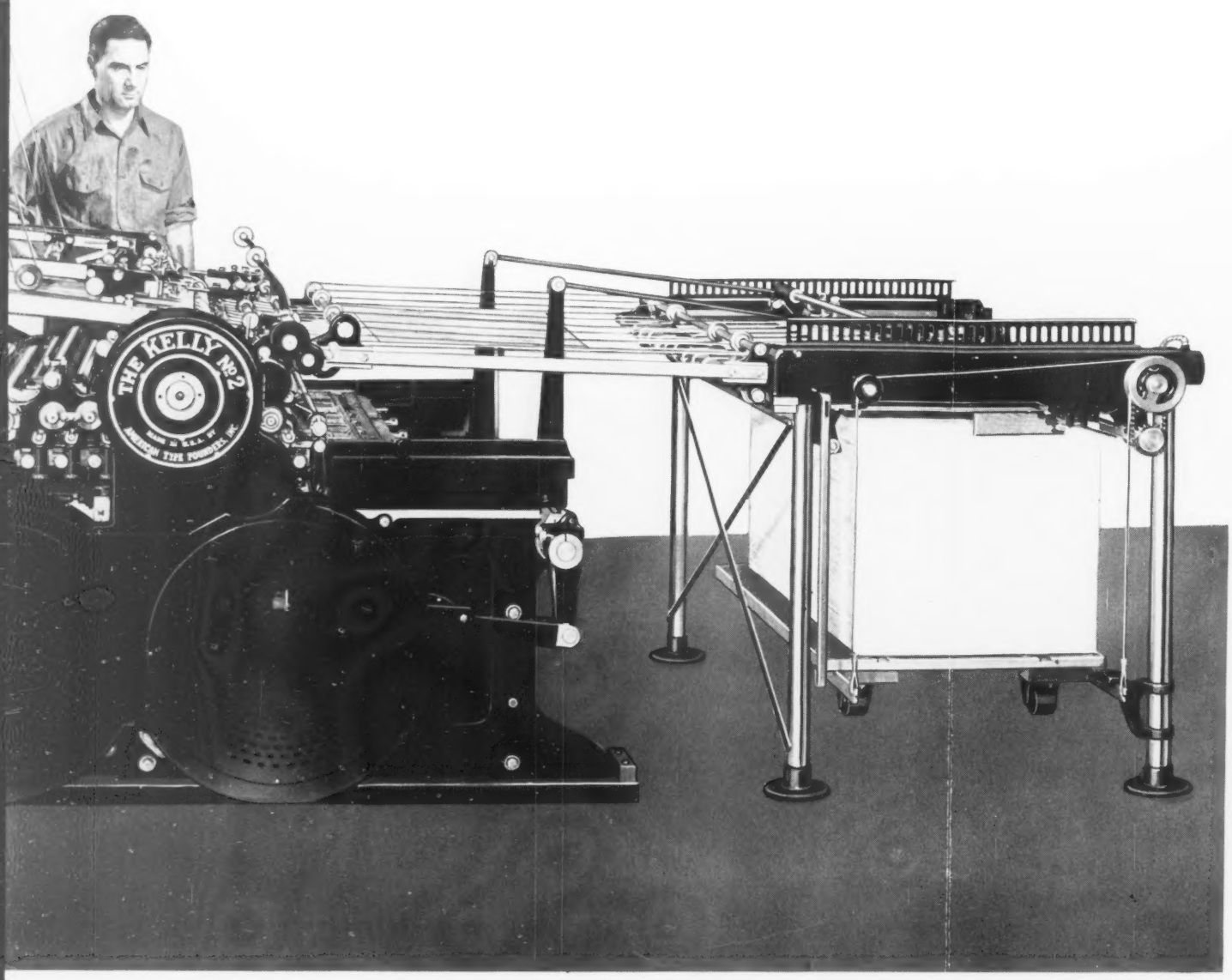
HIGH-SPEED STOCK LOADING

No time out, no lost production for stock reloading on the Better No. 2 Kelly. While the pile of stock on the working feed board runs down, a fresh pile of stock is prepared in leisurely fashion by your pressman on the auxiliary feed board. Twenty seconds after the last sheet is fed, he has the fresh pile of stock in place, and feeding to the press.

SPECIFICATIONS

Standard Sheet	22½x
Largest Sheet	24x
Smallest Sheet	8½x
Inside Chase (Poster)	24¾x32
Inside Chase (Skeleton)	24¾x31
Type Bed Size	28½x37
Roller Coverage from deadline	(6⅝) 21
Lightest Stock	One
Heaviest Stock, 6ply—with Special Attachments	
Feeder Capacity	21
Delivery Capacity	
Speed Range	2200
Floor Space (Open)	6 ft. 11 in. x
Horsepower to Drive	
Net Weight	
Domestic Gross Weight	

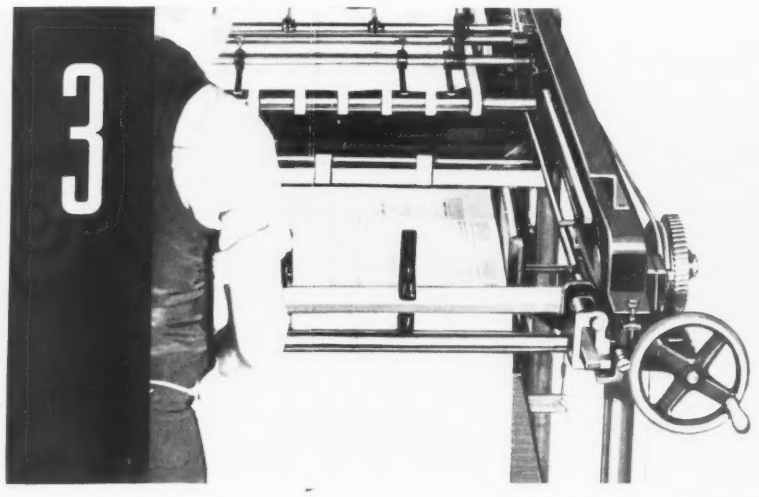
Motored by Kimble



PECIFICATIONS

sheet	22½x35 in.
sheet	21x35 in.
sheet	8½x11 in.
ase (Poster)	21⅝x32⅝ in.
ase (Skeleton)	21⅝x31⅝ in.
Size	28⅝x45⅝ in.
verage Interdealling	6 to 21⅝ in.
stock	0mm-8pt
Stock (with Special Attachment)	8pt
apacity	21½ in.
Capacity	25 in.
ize	2,200 lbs.
ce (Open)	6 ft. 11 in. x 15 ft.
er to Drive	½
ht	10,000
Gross Weight	12,340

Motored by Kimble



SELF-LOWERING DELIVERY

No attention is required from your pressman for lowering the delivery on the Better No. 2 Kelly. Automatically, notch by notch, the delivery table descends as the press runs until the job is finished, or until 27 inches of stock (6250 sheets of average paper) has been delivered. He is free to watch the printed sheets as they are delivered.

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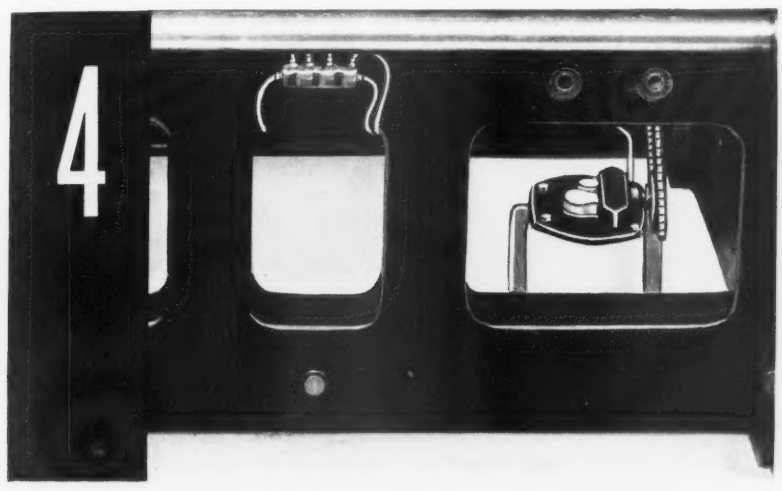
REGISTER—**The great popularity of the Better No. 2 Kelly for color work results from its unfailingly accurate** register. The simplest kind of adjustments provide complete control of sheets by your pressman at all speeds. The drop-guides, and simple pull-guide controlling side register, are adjustable while press is running; a sheet slow-down mechanism prevents sheets from rebounding at the drop-guides.

FEEDING—With positive-acting, suction-wheel type feeder your pressman can set his stock . . . thereafter give it little attention. Adjustments from one sheet size or weight to another are simply and easily made. The printer avoids production interruptions, even on onionskin to 6-ply (and heavier) stock with the Better No. 2 Kelly.

INK DISTRIBUTION—When ink reaches the form rollers of the Better No. 2 Kelly it is already worked-up to just the proper consistency. The pyramid system provides proper ink distribution at high, profitable press speeds.

IMPRESSIONAL STRENGTH—The cylinder gear does not move up or down but remains in constant mesh with the driving gear . . . large solids and heavy halftones are no problem at all to the Better No. 2 Kelly.



AUTOMATIC LUBRICATION

Clear, filtered oil is fed automatically from conveniently located central reservoir to all main bearings on the Better No. 2 Kelly. Flow of oil is automatically controlled in proportion to speed. One "shot" of the plunger speeds oil to all parts, and prepares the press for starting in 20-seconds time. The reservoir filled, no further attention need be given it.

PRESSMEN PREFER IT

Pressmen like the Better No. 2 Kelly because of its many conveniences . . . the added features which reduce effort. They appreciate the ease with which side and drop-guides are set; accessibility of the form; the ample working space provided; simplicity of adjusting the form rollers; the little effort required to set the fountain, and the ease with which it can be controlled while press is running. Numbers on the delivery frame correspond with the numbers of the fountain screws. Your pressman can see precisely where delicate changes of ink-flow will improve the job.

EXTRA FORM SIZE

The maximum coverage of the Better No. 2 Kelly is $21\frac{3}{8}$" from the deadline with two form rollers . . . add $\frac{5}{16}$" for coverage from the gripper edge. The Better No. 2 Kelly actually covers a 24x35" oversize sheet with auxiliary distributor. This extra coverage is an advantage on type forms, and everything printed below the red line is a plus-value you receive with the Better No. 2 Kelly.

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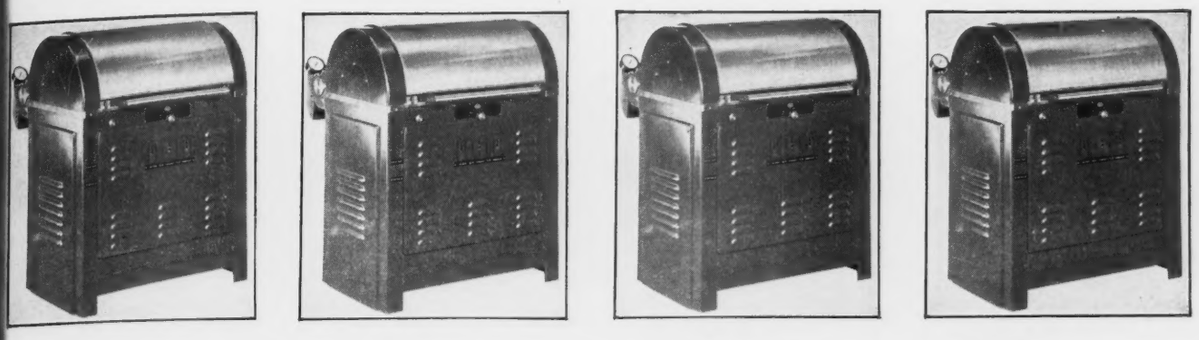
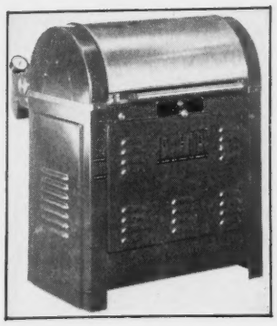
BOSTON IS TOOLING UP FOR TOP PRODUCTION AND QUALITY PRODUCT WITH THE MASTER FORMER





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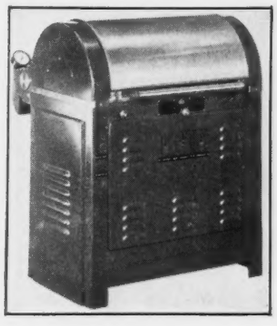
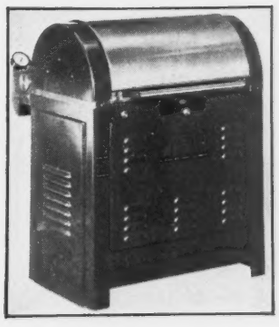
OF 'EM





The BOSTON HERALD, BOSTON GLOBE, and CHRISTIAN SCIENCE MONITOR, ordered 7 Stahi MASTER FORMERS for effecting Automatic Shrinkage Control, with Uniform Casting and Printing Levels, and Speeding Up Production. 13 other MASTER FORMERS are in daily operation with enthusiastic owners. It's time to tool up with modern machinery.

STA-HI CORPORATION

1020 CROCKER STREET **LOS ANGELES, CALIFORNIA**

Fluorescent Lighting...

for Tampa (Fla.) Morning Tribune Composing Room found to be flexible and peculiarly adapted to workers' needs

ONE of the latest installations of fluorescent lighting in newspaper composing rooms has been completed by the Tampa (Fla.) *Morning Tribune.* Incidentally, it is one of the first business establishments to install this type of lighting. The installation was executed and much of the equipment was manufactured by the *Tribune's* plant engineer, P. W. Pressley. Mr. Pressley, in cooperation with Composing Room Superintendent S. B. Andrews, laid out a tailor-made job to fit the peculiar demands of the *Tribune's* modern composing room.

Both Mr. Pressley and Mr. Andrews have had years of experience with lighting fads, new reflectors, new fixtures and innovations which have come and gone in the printer's battle for efficient lighting. Both knew his needs and figured out the new lighting to conserve eyesight and increase comfort and efficiency.

That they were successful would be putting it mildly, for only those who know how hard it is to get printers to agree will appreciate the result.

Without exception the new lights were endorsed by all employes in the composing room.

Actual foot-candles of useable light on working surfaces was increased over the old type of lighting from 60% to as much as 150%. Light load in watts was reduced more than half with corresponding decrease in cost of current.

The main lighting fixtures were made from galvanized steel in rectangular shape, 20 in. by 24 in. and 2 in. deep, into which were fitted three 20 w., 24 in. fluorescent tubes. The reflector channel was made of stainless steel. Connectors, starting switches and transformer were mounted in the fixture so as to be readily accessible for replacement. The fixtures are supported from the ceiling by ½ in. conduit and drop chains were attached to starting switches to provide individual switching.

The old lighting equipment was removed from the lighting canopies over makeup tables, and the fluorescent reflector strip and connectors were installed. Space under these canopies was found adequate for three 30 w., 36 in. tubes. All makeup men were enthusiastic after the installation.

View, looking upwardly, of fluorescent light installation in canopy over makeup table in composing room of Tampa (Fla.) Morning Tribune. After the reflector strip had been installed, three 30 w., 36 in. tubes were placed mounted continuously as shown. Composing Room Superintendent Andrews stated that in the Tribune plant, all of the reflectors had been given a dull, rather than a polished finish, so as to prevent glare.

General View of Tampa (Fla.) Tribune composing room showing overhead fluorescent lighting units devised by Plant Engineer P. W. Pressley and Superintendent S. B. Andrews. Three 15 w. tubes are used for each unit. Connectors, starting switches and transformers are all mounted in each unit. Individual canopies and mounting can be seen over ad assembly cabinets.

Fluorescent lighting also was installed over the ad banks, markup desk and is rapidly making its way to all corners of the composing room. Nearly all standard sizes of fluorescent tubes from the 40 w., 48 in. size down to the 20 w. size were used.

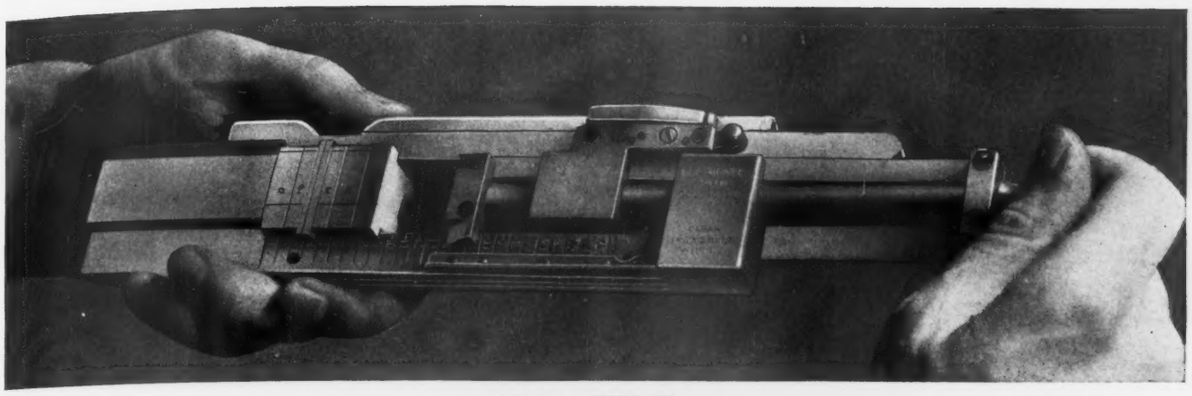
In nearly all cases the transformer and starting switch were mounted in the fixture it controlled and due to good line voltage and efficient design there was almost total absence of flicker or stroboscopic effect.

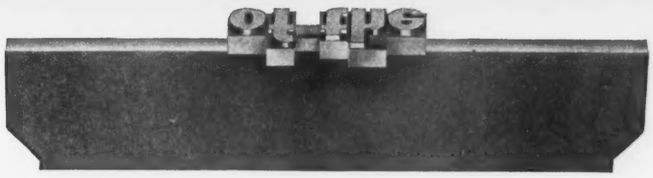
There are several methods of installation of fluorescent lighting transformers, including placing them in walls, closets and even a considerable distance away from the lights which they control. Both this system and the placing transformers with the fixture have their advantages. Mr. Pressley and Mr. Andrews decided it would be better to install all transformers with the fixtures in the *Tribune* plant, so that in case of transformer or light failure the house electrician would not have to trace the transformer to a wall receptacle. Thus all that would be necessary would be to temporarily cut out the offending light, for the short time necessary to make the repairs, which would not disturb the lighting of the remainder of the composing room.

"Fluorescent lighting seems to be peculiarly adapted to composing room needs," Mr. Andrews said, "and is very flexible in regard to installation since it can be run from 2 ft. up to 60 ft. in continuous strips, or broken up in short lengths. It puts the right amount of cool light where it is needed."

Among the manufactured strip used in the *Tribune* installation are Curtis, Daybrite and Lumax.

Fluorescent lighting added to modern air conditioning which the *Tribune* has enjoyed for some time, is a finishing and modern touch which provides pleasant, comfortable and efficient working conditions.





CENTERED LINES Ludlow-set in half of the usual hand-set time

It takes a lot of time to center a line set in single types. Juggling quads and spaces from one side of the line to the other, and spacing tight-to-lift, does not make for efficient production.

● The compositor equipped with a Ludlow Self-Centering Stick can produce centered lines on the Ludlow even faster than straight full-measure composition. With this stick set to any desired measure, the compositor "gathers" typeface matrices and drops them into the stick, adding only the spaces between the words, and then merely pushes up and locks the slide against the matrices. The typeface matrices automatically center accurately on the measure, and the spacing of the slug is positive beyond possibility of transpositions or pi. It's as easy as that!

● This time-saving feature is typical of Ludlow efficiency and economy. The Ludlow system provides so many short cuts and simplified practices that it's no wonder that the production record, day in and day out, of a Ludlow-equipped composing room is one which assures economical operation.

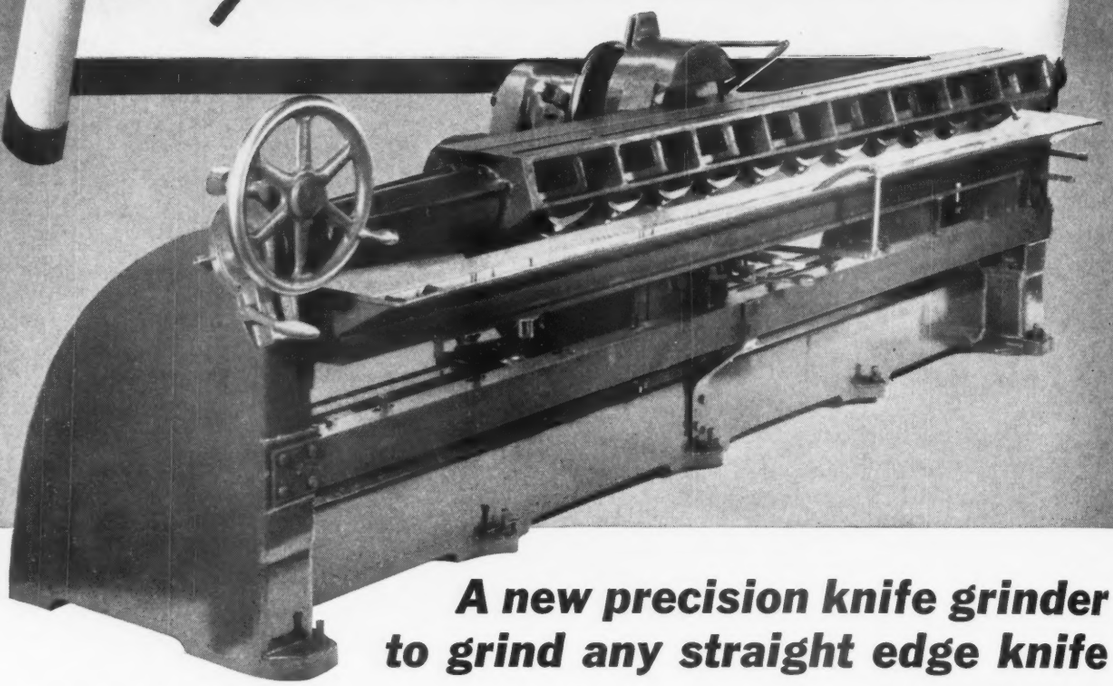
● Without necessity of casting or storing type in advance of composition, the Ludlow system of hand-setting matrices direct from copy provides a never-ending supply of new display composition in the most convenient form to make up and print—all-slug composition.

● The full story of the advantages of operating with Ludlow equipment and time records for setting representative pieces of display composition the Ludlow way will be gladly sent to you upon request, without obligation.

LUDLOW TYPOGRAPH COMPANY 2032 Clybourn Avenue, Chicago, Illinois

Set in Ludlow Tempo Heavy Condensed, Tempo Bold Condensed and Tempo Medium

Seybold Announces:



A new precision knife grinder to grind any straight edge knife

● Ready for immediate shipment is this new 100" Seybold Precision Knife Grinding Machine. Wholly redesigned, it offers a number of improved features to make the grinder more efficient and more valuable to the user.

A unique feature is a hollow three-sided knife bar, each surface of which presents a different series of angles to the action of the traveling grinding wheel. One open side, clearly visible in the photograph, makes the back of one surface of the knife bar quickly accessible for bolting and clamping blades in desired position.

Because of this unusual flexibility it is possible to grind not only standard paper knives, but also shear blades and doctor blades, planer, chipper, barker, hog, and rag knives; in fact, almost any straight-edged knife, long or short, with any degree of bevel or bevels in general use.

This new machine retains all the desirable features of the older Seybold Precision Knife Grinder. It is a high-speed grinder with automatic wheel feed centrifugal pump cooling system. Removing an absolute minimum of metal, it produces a keen, true cutting edge that requires very little honing. It does not require an experienced operator. Made in three standard sizes — 70", 100", and 128" length — other sizes to order.

SEYBOLD DIVISION, Harris • Seybold • Potter Co.
832 WASHINGTON STREET • • • DAYTON, OHIO

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TORONTO, MONTREAL: Harris-Seybold-Potter (Canada) Limited

A TECHNICAL PUBLICATION FOR THE MECHANICAL EXECUTIVE RESPONSIBLE FOR PRINTING PRODUCTION, EQUIPMENT AND SUPPLIES IN THE COMMERCIAL, MAGAZINE, PRIVATE PLANT AND DAILY NEWSPAPER FIELD.

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- THE PRACTICE OF PRESSWORK — *By Craig R. Spicher.* We offer copies to our readers at the special price of $4.00 per copy, cash with order. No printer should be without a copy (9000 copies printed).
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JULY, 1940

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Application is pending for acceptance under Act of June 5, 1934.
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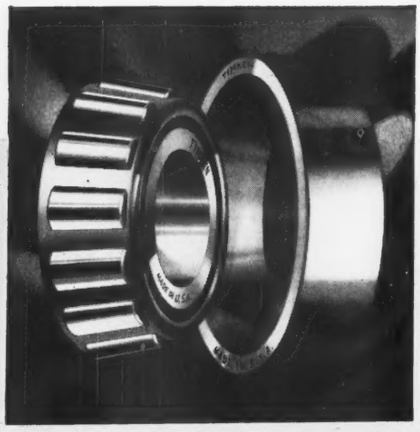
Member Controlled CCA Circulation Audit



42 years

OF DEVELOPMENT AND EXPERIENCE

The successful application of roller bearings to any type of equipment requires two basic factors.

FIRST, CORRECT BEARING DESIGN, MATERIAL AND CONSTRUCTION

The TIMKEN Bearing of today is the finest tapered roller bearing that has ever been made. Timken history over a period of 42 years is a story of continual improvement in bearing design—in fact Timken has pioneered every important refinement and improvement ever made in tapered roller bearings. Among these Timken achievements are: the one-piece multiple perforated cage; TIMKEN Electric Furnace Alloy Steel; TIMKEN Bearing surface finish, the finest finish known to modern bearing science; and wide area contact between the ends of the rollers and the under-cut rib of the cone, thus assuring accurate roller alignment around the periphery of the raceways, without which high bearing speeds would be impossible.

SECOND, LONG EXPERIENCE IN APPLYING THE BEARING TO MEET THE PROBLEMS OF ANY TYPE OF EQUIPMENT

Timken has successfully applied bearings to every kind of mechanical equipment. It takes several years to thoroughly prove the successful use of bearings in meeting the individual specialized problems of any given condition of service. Timken's vast fund of experience takes the guesswork out of bearing application.

When you install TIMKEN Bearings you are not experimenting. You get both of these two important basic factors that are so necessary for dead-sure, satisfactory bearing performance: *first,* correct design, material and construction; and *second,* 42 years of engineering experience in applying bearings.

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

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The Trend to HOE continues

with an Order from

The Miami Herald

8 New Hoe Arched-Type Super-Production UNITS
2 New Hoe Super-Production Double-Former FOLDERS
8 New Hoe Reels Electric Tensions Full-Speed Pasters

***and* 2 HOE Color Cylinders, 2 Pairs of Upper Formers and Substructure**

Increasing considerably the large volume of pressroom equipment now under construction at the Hoe plant, here's the latest order . . . from The Miami Herald.

With such a considerable investment involved, it's natural to conclude that the executives of The Miami Herald reached their decision only after a painstaking investigation of all existing pressroom equipment and thorough comparison to determine the finest newspaper press available today.

Their decision to buy from Hoe contains a tacit message for every progressive publisher who is on the verge of selecting new pressroom equipment. For such preference there must be a reason.

R. HOE & CO., Inc.

General Offices: 910 East 138th Street (at East River) New York, N. Y.

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make the ATF LITTLE GIANT

America's fastest selling cylinder press!

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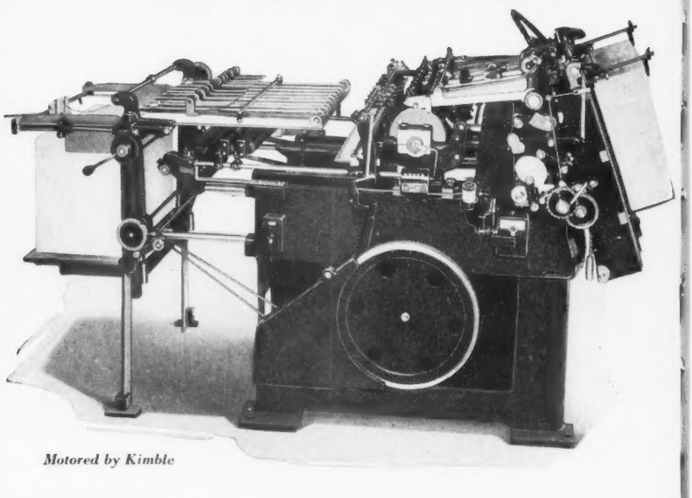
2. Quick Lockup and Changes!
3. Quick Makeready!
4. Quick-set Feeder!
5. Accurate Control of Register!
6. Ample Ink Distribution!
7. 11x17 one-up, 8½x11 two-up!
8. Top Speed of 3500 an hour!



Motored by Kimble

These **BIG** Little Giant advantages give you more salable sheets at the end of the day. Less cost per thousand than any press in its size range. The Little Giant is simple and accessible . . . lockup and makeready time are cut for fast get-away and speedy imprint changes. These and many other advantages are the reasons why the ATF Little Giant is a real money-maker . . . and America's fastest selling cylinder press! Ask your ATF Salesman or agent for two-color press sheet, or write to

American Type Founders

200 ELMORA AVENUE, ELIZABETH, NEW JERSEY

Branches and Agents Everywhere

America's lowest priced cylinder press!

Also makers of ATF Type, Kelly Presses, Composing Room Saw, Non-Offset Gun, Rubber Plate Machine and ATF-Webendorfer offset presses.

Types used: Bodonis, Franklin Gothics, and Modern Arrows

Try these on YOUR Typesetting Machine

. . . . All Modern Typesetting Machines now have Quadding and Centering Attachments, but only **MONOTYPE AUTOMATIC QUADDING AND CENTERING** *can be applied to lines like these:*

Right and Left Folios with Centered Headings

98 THE BOHEMIAN GIRL
THE BOHEMIAN GIRL 99
8 THE VAGABOND'S RETURN
AT THE COTTAGE GATE 9

Left and Right Folios with Right and Left Running Heads

WHERE AND HOW TO GO 19
20 HOLIDAY JAUNTS
PREPARING FOR A TOUR 21

Automatic Leader Work

THE PRESSMAN....118
COMPOSITION MACHINES....119
DETERMINING MARGINS....120

Automatic Leader Work with Multiple Figure Columns

Cooper, George Thomas	12	6	6	11	0	0	14	6 10
Coles, Frederick	9	8	4	106	0	0	52	0 0
Dodd, Frank Charles	14	6	6	18	15	0	99	0 0

Automatic Leader Work Set Diamond Shape

Friend, Mrs. M., Sheffield	..			..			11	0 0
Hall, W. Greaves, J. P., Sheffield		..			..		12	0 0
Johnson, F., Sheffield..	..			..			13	0 0

Words of Different Length at End of Line with Leaders Between

HORDAN & SON....CHANCERY LANE, W.C.2
PRINTERS & PUBLISHERS....SOUTHEND-ON-SEA
SEVENOAKS NEWS....SEVENOAKS

Words on Left or Right with Leaders Close Up

THIS....
....WAS
SET....

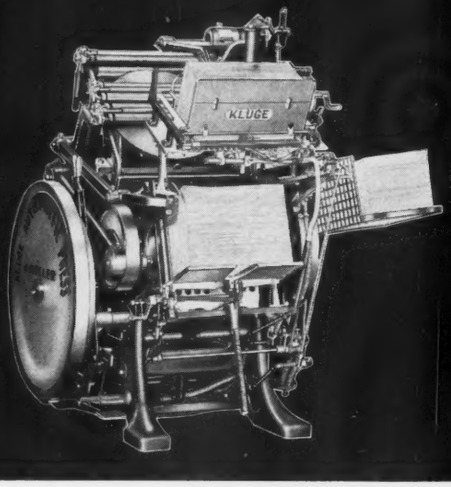
Words on Each End with Words Centered Between

SELECTION	"Round the Map"	*Finck*
TWO STEP	"The Spring Chicken"	*Ayrton*
FOXTROT	"Broken Doll"	*Pether*

Send for Booklet Describing MONOTYPE AUTOMATIC QUADDING AND CENTERING. It's Interesting and Instructive.

LANSTON MONOTYPE MACHINE COMPANY
Monotype Building, Twenty-fourth and Locust Streets, Philadelphia, Pa.

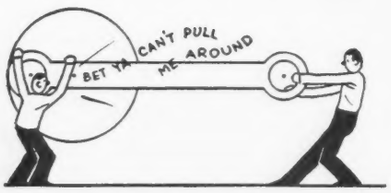
BIGGER PROFITS *from* BETTER IMPRESSIONS



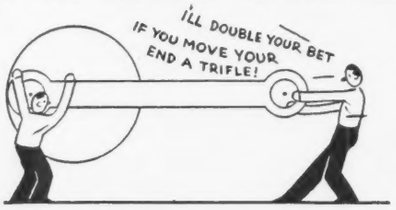
Kluge's *"Rigid Impression"* produces better printing that brings you more work and larger PROFITS.

Your surest path to increased profits is through the production of better printing, the kind of printing that brings better prices. And the easiest, surest way to produce better printing is to replace obsolete job press equipment with the press with "Rigid Impression", — the impression that produces better printing. Write today for the booklet explaining in detail the ***"Rigid Impression"*** of the Kluge Automatic Press.

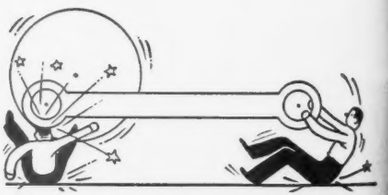
THE SECRET OF KLUGE "RIGID IMPRESSION"



Kluge Stationary Backshaft — When the backshaft is held stationary with the eccentric on dead center, as on the Kluge Automatic Press, it is impossible to twist it on impression no matter how much force is applied.



The Oscillating Backshaft of the ordinary platen press frequently yields, or twists, on impression because it hasn't reached dead center when impression starts. This necessitates more make-ready in the form of



"Squeeze" which in turn increases the yield in the backshaft. Thus, it is extremely difficult, if not impossible, to print a better class of work satisfactorily on a platen press with an old style oscillating backshaft.

THE WORLD'S LARGEST EXCLUSIVE MANUFACTURERS OF PLATEN PRESS EQUIPMENT

BRANDTJEN & KLUGE · INC.

MANUFACTURERS · SAINT PAUL, MINNESOTA

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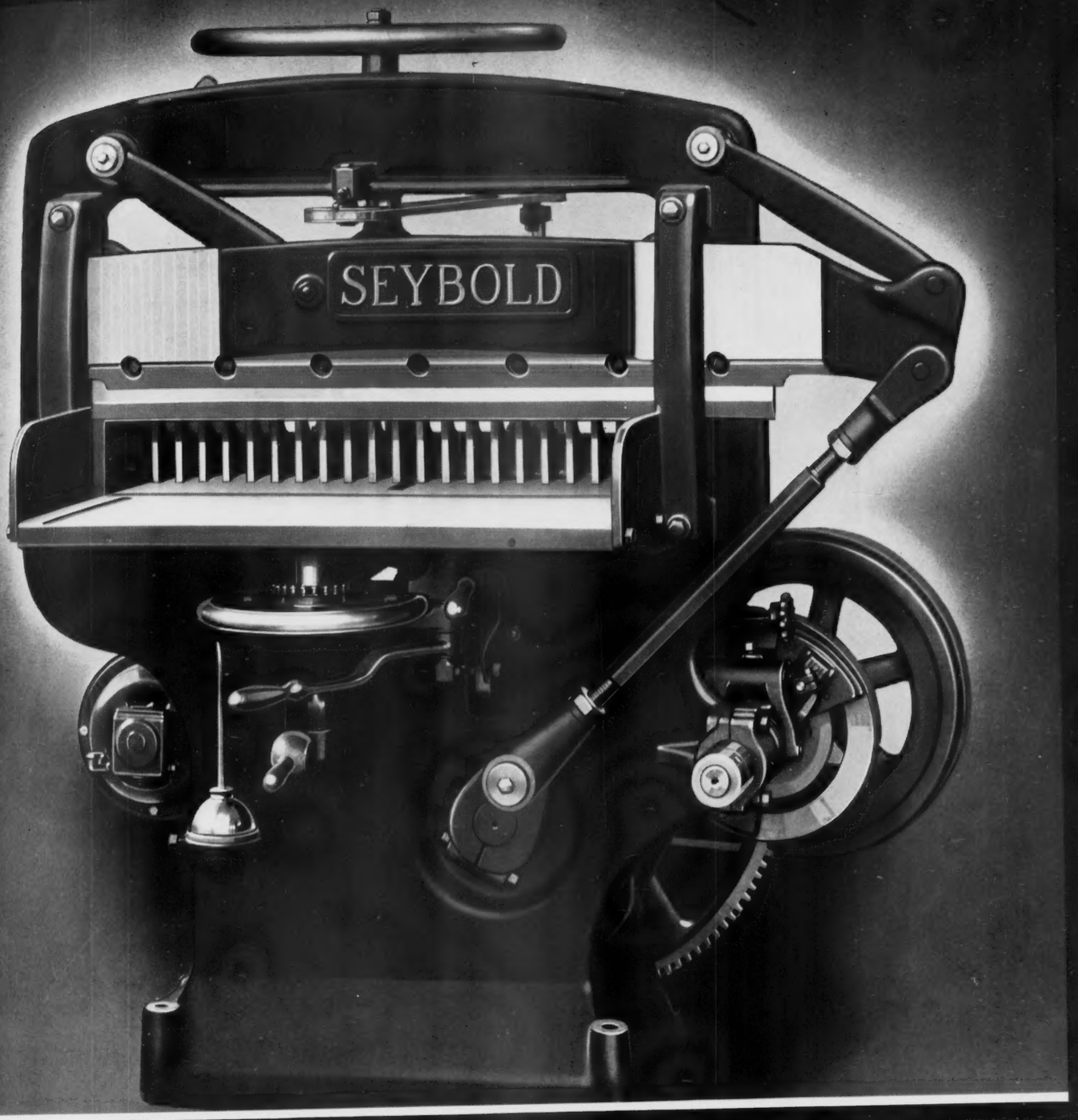


SEYBOLD

MONOFRAME

34" HAND-CLAMP POWER CUTTER

SEYBOLD MONOFRAME

34″ Hand-Clamp Power Cutter

SIMPLE in design, yet powerful and massive in construction, the Seybold Monoframe Cutter is the most accurate and most dependable small-size hand-clamp power paper cutter built. It cuts easily, quickly and accurately a full pile of any material that can be cut with a bevel knife—cardboard, hard paper, mimeograph paper, or tissue.

Its low price and its dependability for all classes of work recommends the Seybold Monoframe to any plant where the work does not justify the purchase of an automatic cutter.

All working parts are self-contained in a solid base, so that they work smoothly with precision accuracy and remain true, no matter in what position the cutter is installed, on any type floor.

The powerful friction driving clutch stands up successfully against the heavy shocks of cutting the hardest paper. Clutch throws out positively after each cut and an automatic friction brake grips firmly and stops all motion. The special Seybold Safety Bolt locks the machine, holding the knife at the top of the stroke, and a deliberate pull of the starting lever is required to start the cutter again.

The Seybold Monoframe Cutter is driven by leather belt direct to a pulley on the rear end of the drive shaft. The motor bracket for individual motor drive has adjustable rails to accommodate any standard make of motor and is adjustable for tightening the belt.

SPECIFICATIONS

Floor Space—60″ wide; 70″ deep.
Packed dimensions (crated for rail shipment)—69″ high; 78″ wide; 62″ deep.
Shipping weight—crated, 3225 lbs.; cased for export, gross, 3700 lbs., net, 2800 lbs. (one case, 145 cu. ft.).
Clamp clearance—4¼″.
Knife length—41″.
Maximum size sheet admitted back of knife—35″ x 34½″.
Motor size recommended—1½ H.P.
Code Word—Jules.

REGULAR EQUIPMENT

TWO KNIVES, five inches wide.

PLAIN TABLE with rule graduated to sixteenths of an inch inlaid two inches from left-hand side.

BACK GAUGE is fingered so it interlocks with the clamp and can come forward to within ¾-inch of the cutting edge of the knife. Back Gauge in three parts; each part may be offset 5 inches. It is provided with an adjustment for setting it exactly parallel with the knife.

CHAIN GAUGE MOVEMENT operated by a hand wheel underneath the front table, provided with a locking lever.

SIDE GAUGES front and back on both sides.

STEEL TAPE RULE INDICATOR above Knife Bar, which shows exact distance of the back gauge from the cutting edge of the knife.

DRIVING PULLEY 20 inches diameter, 4-inch face. Speed of driving pulley, 300 r.p.m.

STARTING LEVER right-hand side.

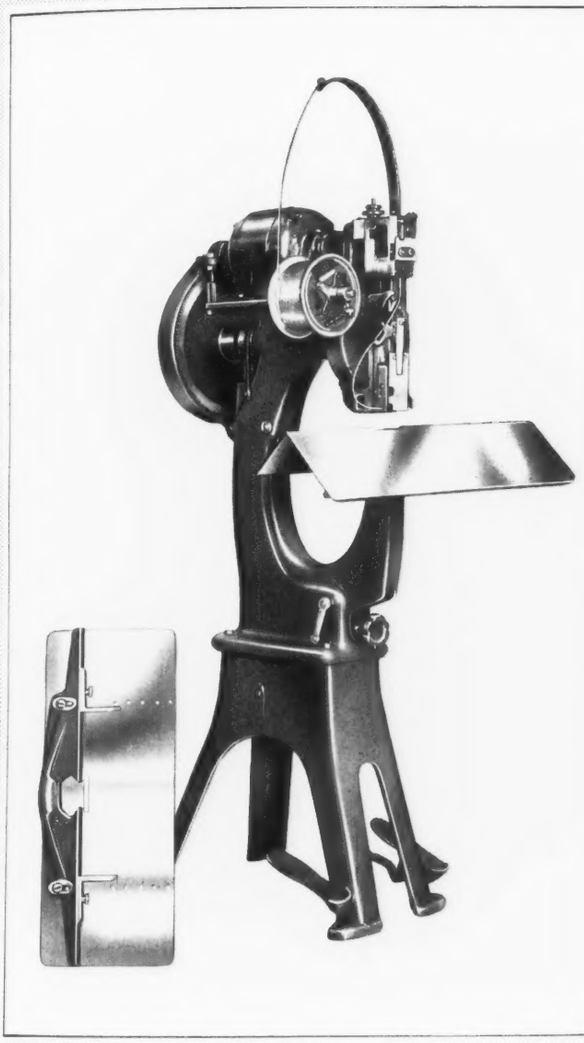
MOTOR BRACKET or LOOSE PULLEY.

SEYBOLD DIVISION, Harris-Seybold-Potter Co., Dayton, Ohio

SEYBOLD

MORRISON

WIRE STITCHER



5A

Simplicity

Sturdiness

Durability

Ease of Operation

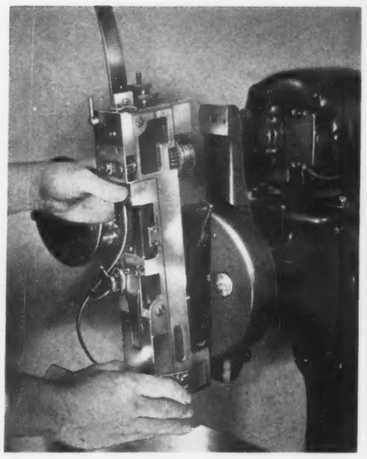
Low Maintenance Cost

Detachable Head

Capacity
2 sheets to 1/4" thick

Wide Range OF APPLICATION

Designed for flat or saddle stitching in the bindery, the Seybold-Morrison 5A Stitcher is also used for stitching artificial flowers, bottle caps, book matches, fly swatters, advertising novelties, dental X-ray film mounts, electro cardiographs, kitchen tools, nut bags, venetian blinds, products on display cards, and many other products.



Detachable Head easily removed when necessary.

SPECIFICATIONS

Capacity	2 sheets to 1/4"	Throat Depth (flat work)	9"
Wire Sizes	#30 to #25 round	" " (saddle work)	10"
Min. Wire draw	27/32"	Table Size	9x21"
Max. Wire draw	1 1/4"	Saddle Size	6x26"
Standard Width of Stitch	7/16"	Gap under Head	7/8"
Stitches per minute	185	Floor Space	15x20"
Height (stitch to floor)	34"	Net Weight	275#

Crated Weight ..... 400#

SEYBOLD DIVISION

HARRIS-SEYBOLD-POTTER CO. • Dayton, Ohio

First Again!

A grand package for a perfect product

Here, at last, is an ink package your pressmen will open safely and easily without waste or mess . . . opens with a simple twist of the wrist . . . saves ink because it reseals with a quick snap . . . another money-saving reason for using Flint Inks.

Howard Flint Ink Company

DETROIT · CHICAGO · INDIANAPOLIS · DENVER · HOUSTON · NEW ORLEANS

Keeping ipi in Touch

PREPARED BY INTERNATIONAL PRINTING INK DIVISION OF INTERCHEMICAL CORPORATION, DEPT. P. E. L. • JULY, 1940

A MACHINE SHOP WITH ONLY ONE CUSTOMER

This machine shop has only one customer—The Research Laboratories of Interchemical Corporation, parent company for IPI. Much of the work being undertaken in the Laboratories is of an individualized—sometimes of a unique—nature. Laboratory physicists and chemists, in many cases, must have equipment of unusual design to carry out these special studies. When this intricate equipment is not on the market, there is only one way to get it—make it.

That is the work of the Laboratory Machine Shop, shown in this picture. In this Machine Shop complex apparatus is manufactured that is not duplicated anywhere in the world. Small instruments and machine parts that are difficult to obtain elsewhere are also made here.

The Machine Shop is just one of the contributing units to the Interchemical fundamental research program—a program which is working continually to discover new principles and to develop new methods that will improve the science of printing.

Color Oddities

- *Flies don't like to alight on pale blue surfaces. Light green is their favorite color for a landing field.*
- *A patent has been granted for cigarettes which give off a colored smoke.*
- *Rice colored to match the bridesmaids' dresses is reported to be used to shower the bride and groom in California weddings.*

- *Only 1.8 per cent of women are blonde, says the Wall Paper Institute. Not counting the synthetic variety, we assume.*

Blackout Ink? It's Used to Cover Up Wrong Words

One of our customers in Buffalo printed 300,000 postcards, and then found that the word "postcard" on the address side would have to be removed since the cards were too large to meet postal regulations. After experimenting with a good many ideas about getting rid of this troublesome word, they gave us a call. We gave them a special "blackout ink," and it did the trick. There isn't the faintest trace of "postcard" left, and the customer is very much pleased to have rescued from the scrap heap 300,000 mailing pieces.

Advertisement

LOOK BEFORE YOU BITE IS LATEST COLOR HINT

How did your orange juice look this morning? We hope it was just the right color, as prescribed by the Department of Agriculture. For the Department has now set up standards of color to which orange juice, grapefruit juice, prunes, tomatoes, peas—yes, even toasted crackers—should conform.

It's no longer enough to classify fruits and vegetables according to taste, size, and so on. They must be within certain tolerances of color, too. The magazine FOOD INDUSTRIES has been printing little folders which show the color blocks to which lima beans, pink grapefruit juices, and the others should be matched.

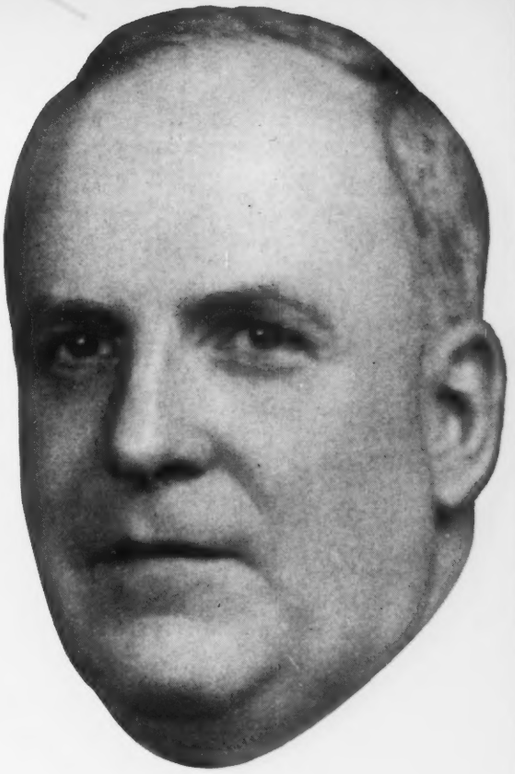
It must be quite a job going through a shipment of lima beans to see if they all match the right shade of green. Fortunately, that isn't up to us. All we had to do was match the inks for the official FOOD INDUSTRIES folders. So if you need any pea green, orange orange, tomato red, or cracker brown, let us know. We have all the formulations on file.

For Your Private Gallery

A sales representative of ours was disappointed to notice that one of his printer friends didn't have his new IPI Color Guide hanging anywhere in his office. Finally, he asked the man if he didn't like the Guide. "Sure I like it," he replied. "In fact, I like it so well that I have it hanging in my home."

No Can Openers Required

So far, no one has packed printing inks in cellophane; in fact, most inks have come in cans that are hard to open and harder to close up again. But there are exceptions. One bright exception is the Everyday line. These inks are packaged in neat, colored cans that are a cinch to open. They can be sealed up tightly, after use, so that losses from skinning and evaporation are minimized. More than 250,000 pounds of Everyday inks have been sold in these handy cans.



John M. Callahan Concludes Second Term As International President

Pacific Coast Craftsmen Ready for Convention

Twenty-first Annual Convention of The International Association of Printing House Craftsmen, San Francisco, August 4th to 8th

Col. George Filmer (left) General Chairman of the San Francisco Craftsmen's Convention Committee greets Frederick W. Goudy (right) on his arrival in San Francisco. Carl Hillers, Co-chairman and W. H. "Bud" Griffin, San Francisco Club President, look on.

FIVE miniature books on history of the printing industry on the Pacific Coast will be printed by the various Craftsmen's Clubs and will be given gratis to all men and women registering at the Twenty-first International Craftsmen's Convention in San Francisco, August 4-8.

The set of books, beautifully printed and hand-bound are to be packed in a cloth-covered, gold-stamped, slip case. Only enough sets are to be printed to completely supply the Convention registrants. Any surplus will be destroyed, as well as the type forms. The rarity of these limited editions will undoubtedly make them a valuable collector's item in years to come.

Ivan Giusti, Registration Committee Chairman, has announced that registration books for both men and women are available. Ten dollars will be the complete cost for each Craftsman or lady. Purchase of a registration book entitles the holder to every Convention event as well as the opportunity to visit the San Francisco 1940 Fair on Treasure

(Picture at Right): Durwood Wright (left), Convention Treasurer, receives the first registration fee from Ivan Giusti, President of The Pacific Society Conference.

(Picture at Left): Frank McCaffrey, International Craftsmen's First Vice President, Seattle, Wash.

Island, and a complete set of the miniature books in the slip case.

Railroads have announced special round-trip excursion rates for the 1940 summer season. The Palace Hotel is Convention headquarters. Rooms may be obtained for as low as $4 single, $5 double. Because there is to be another large convention in San Francisco at the same time, it has been suggested by the hotel committee that room reservations be made direct with the Palace Hotel at a very early date.

With the opportunity of visiting a Craftsmen's Convention, World's Fair and one of the world's most cosmopolitan cities in one trip, it is expected that this 21st Annual Convention of the International Association of Printing House Craftsmen will draw hundreds of men and women to the Pacific Coast.

FLUORESCENT INKS *have arrived*

and will replace phosphorescent inks — Some of their characteristics and color properties

By STAFF WRITER

FOR years there has been a demand for so-called luminous or phosphorescent inks that would glow in the dark similar to the phosphorescent hands of watches and clocks. These are painted in a thicker layer than the printing ink film which gives but a weak, pale glow or gleam. After years of research and experiment, phosphorescent inks have been discarded for the fluorescent inks which yield a far stronger glow or light emission under exposure to black light (near ultra-violet light) in darkness.

Opaque and Transparent Inks

The new type of luminous inks may be had with both opaque and transparent bases. The transparent fluorescent ink printed over ordinary inks is invisible under ordinary light while under black light the ordinary color (first down) is invisible and only the glowing transparent fluorescent ink is visible. Striking multicolor effects are possible by printing transparent fluorescent ink over ordinary ink and exposing the print to black light during one period of time and to ordinary light during another. Black (near ultra-violet) light is just beyond the blue in the visible spectrum.

The fluorescent inks have good working quality and those with opaque base may be applied over backgrounds of any color, differing from old surface coatings of luminous character, requiring careful application on backgrounds with high light-reflecting quality. The new inks may be applied on any non-oily surface suitable to regular printing ink such as paper, card, wood, metal and leather.

Fluorescence

Since the activating light is hidden, the print in fluorescent ink appears to gleam or glow from each point within itself. Physicists state that fluorescence is a sort of radiation from the molecules of the ink under the activation of the absorbed black light. The energy of the absorbed waves of light produces molecular vibrations which give off waves of light just as waves entering a harbor may cause ships to rock and become centers from which waves travel outward.

Fluorescence is named from fluorspar in which it is strongly marked. The waves of fluorescent light cannot be shorter than the absorbed waves to which they are due.

If a strong beam of light is passed through a block of glass colored with uranium oxide, the transmitted light is yellowish, denoting absorption of the shorter wave lengths. In addition, the block of glass glows with green light, apparently originating in the glass, to which it gives a milky turbidity.

Fluorescence is stronger near the side of the block of glass where the beam of light enters and as it penetrates by absorption it loses the rays which activate fluorescence.

A piece of red glass across the beam of light cuts off all fluorescence while blue cobalt glass hardly weakens it at all, denoting that fluorescence derives from the shorter wave lengths transmitted by the blue glass but suppressed by the red.

Many substances show fluorescence: Heavy mineral oils, crude petroleum, refined kerosene and the coal tar (anilin) derivatives, fluorescein and eosin.

Phosphorescence

When fluorescence continues after illumination stops, it is termed phosphorescence. With the phosphoroscope it was found that paper glows for a fraction of a second after the beam of light is cut off.

The sulphides of barium and calcium are phosphorescent and the color of the light is influenced by slight impurities. This sort of phosphorescence is termed physical. That of the fire-fly and of phosphorus is due to chemical changes.

Permanency of Fluorescent Inks

The new fluorescent inks are planned for indoor use and are equally permanent with ordinary inks for indoor use. Invisible green fluorescent ink has sufficient resistance to sunlight for satisfactory use in exposed window display and temporary outdoor exhibits like Christ-

mas and sporting-event lighting. Other fluorescent colors should be protected against direct sunlight.

Invisible Colors

In the range of twelve principal fluorescent inks are invisible blue, green and white, approximately white under natural light but "invisible" on a matching white paper. Prints in invisible inks on blank white surfaces are changed into gleaming designs on dark backgrounds when regular lights are shut off and black light turned on the invisible prints. Unlike older so-called invisible inks, the modern ones will not fade nor turn brown.

Invisible blue under natural light appears white and under black light it is a gleaming blue; invisible white appears white under natural but glows under black light; invisible green appears light cream under natural and a glowing green under black light.

Among the other non-visible colors blue, medium green and orange emit under black light a glowing light similar to their hue under natural light. Pearl white appears flesh color under natural and glowing white under black light. Light green appears lemon under natural and glowing green under black light. Medium yellow appears yellow under natural and glowing lemon under black light. Orange chrome yellow appears orange under natural and glowing yellow under black light. Rose appears rose under natural and glowing red under black light, and magenta appears magenta under natural and glowing pink under black light. The glow of both visible and non-visible colors under black light is very strong, similar to neon light.

In addition to printing inks, fluorescent colors are available in opaque lacquer enamels, transparent lacquers, dyes, dips, artists' pastes, water mix paints, water solubles, etc.

Fluorescent effects were probably first used extensively in the theater in costumes and in the lighting effects utilized by magicians. Theaters now use black light in auditoriums and foyers, one of the latest applications being to illuminate carpets, rugs and statuary so that they will glow from within. Other uses of fluorescent colors are for scenery, stage props, window displays, interior displays, outdoor shows, art renderings, demonstrations, interior decorations in restaurants, ball rooms, night clubs, auditoriums and homes and sales sketches of costly electric signs, store fronts, lighting installations, etc.

ATF Internal Notes

The election of Joseph A. Brophy, president of J. P. Brophy & Company, Elizabeth, N. J., as a member of the Board of Directors of American Type Founders, Inc., was announced on June 11 by President Thomas Roy Jones, following the regular annual stockholders meeting.

At the meeting of the Board of Directors following the stockholders' meeting, Thomas Roy Jones was re-elected president of the company. Other officers to be re-elected were: Edward G. Williams, executive vice president; James A. Coleman, secretary and treasurer; George S. Tiernan, assistant sceretary and assistant treasurer; Victor J. Olearo, comptroller.

T. J. Kauffeld, Manager ATF's New Products Development.

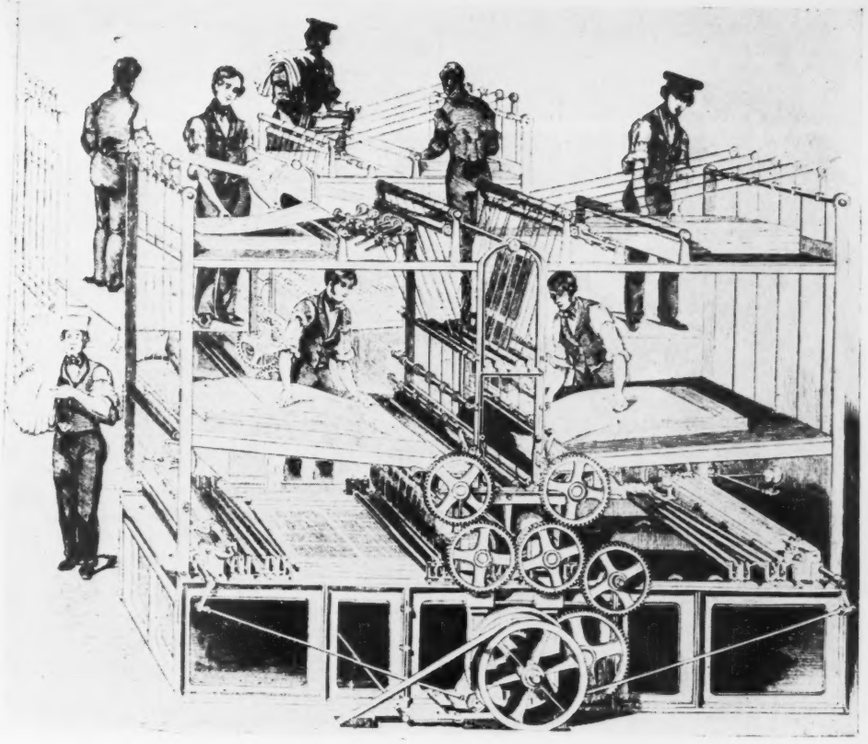
It was announced at the meeting that H. I. Lewis, formerly vice president in charge of product development, had resigned to accept another post. President Jones stated that Mr. Lewis' responsibilities will be taken over by Theodore J. Kauffeld who has been appointed manager of new products development. Mr. Kauffeld is a graduate of Stevens Institute of Technology.

New Sales Promotion Manager

The Geo. H. Morrill Company, Division of General Printing Ink Corporation, announces the appointment of Charles R. Sherman to the position of Sales Promotion Manager in charge of job black and color ink sales.

In addition to Mr. Sherman's work in connection with sales promotion, he will supervise advertising in connection with job ink sales and will closely contact the various laboratories, in order to keep the sales staff intimately informed on new processes and developments.

Treasurer Paul L. McIlree, of the Honolulu Hawaii Star-Bulletin, who recently came to the United States for the purpose of investigating latest newspaper and lithographic printing equipment for the Star-Bulletin and for the Honolulu Litho Co. Before returning, Mr. McIlree attended the Lithographers' National Association convention in Del Monte, Calif., early in June.



HIGH SPEED PRINTING PRESS

One of the first high-speed printing presses constructed by Middleton. The construction of the then new machine, fed by hand, marked the beginning of the modern daily newspaper. The first two presses for the London Times *were built in 1814 by Friedrich Koenig. They were operated by steam power at 1000 sheets an hour. The new presses were used to carry the type beds back and forth under revolving cylinders over which paper was fed by hand, sheet by sheet. The mechanical principle is employed in presses used in printing offices today.*

QUALITIES OF PAPER *and their relationship to engravings and inks in high-speed reproduction*

By STAFF WRITER

SPEED makes demands upon paper. If its surface tends to lift or flake, trouble ensues when printing solids. One requirement of paper for printing at present-day speed is that its surface must be so integrated with its body stock that no lift or flaking shall develop at top speed. Other necessary qualities for high-speed printing are those needed for all high-grade printing. Both sides of the paper should produce equally good results. The color of both sides should be the same. Each sheet should be uniform throughout its area in body, surface and thickness. Each sheet should be like the one which precedes and follows it in the run. Furthermore, paper should contain no ground wood lest it discolor under the application of the intense heat sometimes used in high-speed printing.

These qualities are demonstrated in a booklet recently issued by Crocker Burbank Papers Inc., in both black halftone and four-color process, with the conditions under which the printing was done clearly stated.

Pre-testing Four-color Process Plates

The difference in speed between the engraver's method of proofing and the printer's method of reproduction changes not only the relationship between materials but also the materials themselves.

The impact of plate, paper and cylinder running at high speed differs from the impact at low speed. *The film of ink deposited on and whisked off the plate at high speed differs in character and form from the film slowly applied and pulled away from the same plate by the engraver.* This is true to some degree even when exactly the same quantity of ink is carried by printer and engraver.

Ink spread at high speed differs from ink spread at low speed even when both come out of the same can. Rollers and plate warm up at high speed and the heat lowers the viscosity of the ink. Ink dried slowly by the engraver takes on a different texture and appearance from the same ink dried more rapidly with heat or with spray.

In black halftone printing the above-mentioned changes cause little comment and concern but become more disturbing in four-color process printing because when multiplied by four printings, the effect on the color, texture and pattern of the finished print is more apparent.

The printer is presented with the problem of adjusting his ink to compensate for the effects of the higher speed of his operation. In many process jobs he finds it necessary to load some plates with excessive ink to match the color in the progressive proofs. This is often true when there is a close working agreement between printer and engraver.

Solution of the Problem

On page 10 of the booklet are rectangular areas of yellow, red, black and blue in solid color and also in about 90% solid, 120 screen. Near-solid values are the most difficult to print without filling and can be used as a gauge of the quantity of ink that can be carried safely. This test is especially revealing if the near-solids are run directly in line with the solids. It indicates just how well a solid can be covered when the near-solid prints clean.

To any printer who wants to ascertain how Crobank Smooth will reproduce any set of plates, either color process or single color, the manufacturers of this paper will send 16-gauge lead mold electrotypes of the plates used to print these tones in the booklet demonstration together with samples of Crobank Smooth for proving.

The printer then asks the engraver to place these electrotypes beside each plate of each color as he proves it and to match as nearly as possible the value and quantity of each color on this sample. This helps the engraver to guard against overload and enables the printer to judge the possibility of matching the engraver's proof in high-speed printing.

Pre-testing Halftones

The printer, when printing single-color halftones is frequently asked, "Can't we get a little more snap in the picture?" regardless of the speed of printing, the quality of ink and the paper and the tone values of the plates. One partial answer to the request for more contrast is an overload of ink to intensify the deeper tones. But an overload of ink causes other troubles.

The correct method of developing snap or contrast in illustrations is to properly light the photographs, or to retouch them, or to burnish, re-etch or tool the engravings and not to carry an excess of ink.

The plates used to print the solid and 90% black solids in the booklet enable the printer or engraver to determine when corrections in photograph or plate or both are necessary to develop contrast in illustrations. In the demonstration the ninety per cent solid plate was run directly in line with the solid plate to show how much ink can be carried without filling.

The single-color and four-color process reproductions in the booklet are in duplicate, one copy on the felt and the other on the wire side of the paper.

In proofing the four-color process plates, two colors were proofed wet with 10-hour drying interval between first two and last two colors to conform with printer's method of printing on a two-color press.

The process yellow and black were run at 1855 and the red and blue at 1735 imp. per hr. The black halftone, type and orange were run at 1986 per hour. All forms were sheetwise.

Institute Adds Equipment

Eight presses and a complete stereotyping plant have been added to the Department of Publishing and Printing of the Rochester Athenaeum and Mechanics Institute, Rochester, New York the past month. A Miller Simplex, Webendorfer Little Giant and five Chandler & Price platens have been installed for the next term. A complete Speed-Line stereotyping plant has been set up.

This year's Institute graduating class, it is reported, will be employed by commercial and newspaper shops from Connecticut to Michigan. Registrations are now being made for the fall term.

Non-offset Spray Solutions

WHILE some apparently do not know, there are different formulae for various non-offset spray solutions designed for use on dissimilar classes of work and the selection of the right solution is important. There are different solutions available for use on cardboards and cartons, commercial printing, label work and so on.

Smaller particles are generally suited for use on smooth surfaces and medium-weight papers. The spray gun is adjustable to produce particles in a range of sizes within the limitations of the solution. When larger and firmer particles are required a heavier solution is employed with more rapid drying of the liquid portion of the solution. The larger particles, while designed for use on rough surfaces, have been used to prevent troublesome offset when smaller particles proved ineffective on smoother surfaces.

The heavier solutions are commonly used for spraying cardboard, cartons, cellophane, celluloid, foil papers, glassine, gloss inks, metallic inks, overprint and other varnishes and rough surfaced papers.

Besides preventing offset, the spray combats sticking and pickoff, freezing of varnished sheets and static and aids drying of ink by interposing a layer of air between sheets.

Good Fellowship permeates Chicago A. N. P. A. Mechanical Conference — Considered most successful meeting in recent years — Technical subjects include new developments — Splendid exhibits draw mechanical executives' interest

By MAC SINCLAIR

WHILE the A.N.P.A. Mechanical Conference held at the Drake and Knickerbocker Hotels, Chicago, on June 10, 11 and 12 was not the largest in point of attendance, yet most everybody present felt that it probably was the most successful from every point of view of all the mechanical conferences held to date. Good fellowship was rampant on the conference floor, among executives mixing in the equipment and supplies areas and wherever groups met informally in the lobbies of the hotel. A total of approximately 900 mechanical executives, publishers, and manufacturer and supplier representatives registered with perhaps a sprinkling of an additional 150 non-registered people identified in one way or another with the industry. Broken down, the registered mechanical executive attendance was 477—all others 423.

Splendid participation in the program by mechanical executives was in evidence. This demonstrated that those responsible for the preparation of the program are conscious of the interest in many of the newer developments, all of which are designed to improve newspaper printing.

Among the new developments discussed at the Conference sessions were lamps for the printing industry, offset printing for newspapers, and Velo cold-set printing ink. *The Standardization of Register Marks for r. o. p. Color Printing, Report on Standardization of Shades of Rotogravure Inks, Cooperation Between Advertiser and the Newspaper, and Preliminary Report on Type Metal Investigation,* all drew considerable interest from the audience. The Departmental Clinic meetings were well attended, as was the meeting on Tuesday morning at which *Problems of Small Newspapers* were discussed.

MONDAY MORNING

Chairman of the Mechanical Committee Fred H. Keefe, who is also publisher of the Newburgh-Beacon (N. Y.) *News*, presided at the Monday morning opening session in the ballroom of the Drake Hotel. He introduced Publisher S. E. Thomason of the Chicago *Times*, who welcomed the mechanical executives in behalf of the Chicago newspaper publishers.

New Lamps for Industry

Chairman Keefe then introduced Assistant Chief Electrician E. E. Fies, of the Chicago *Tribune*, who discussed experimental installations of new lamps in the *Tribune* plant, under the subject *Our Experience with Fluorescent and Other New Lamps.*

Some of the applications have been for general illumination, makeup tables, proofreaders, stripping and opaquing tables, printing frames, printing press illumination, etc.

The daylight fluorescent tubes give fine results and simulate north daylight. Wherever possible, the lamps are mounted 3 ft. 6 in. above the working plane and are usually grouped in banks of three. The lamps not only reduce current consumption because of low wattage as compared to Mazda lamps but also reduce heat radiation.

For specialized operations, such as lighting units for the ben day room, in which two 50 w. lamps are used per unit, negative viewing lamp units in the color engraving room in which are used two 20 w. tubes, and the stripping table units, Mr. Fies recommended flashed opal glass facing for the units. The glass has the property of diffusing the light evenly and eliminates "hot spots" with minimum loss of light rays.

The High Pressure Mercury H6 water-cooled tube used in photo-engraving created considerable interest on the part of the executives present. Mr. Fies discussed the safety features of the lamp, the operating temperature of which is 120 deg. F. The life of the lamp is approximately 100 hours. It is superior to arc lamps, asserted Mr. Fies, inasmuch as particles given off by carbon lamps are eliminated. There is a saving in printing distance and the lamp prints 16 times as fast. The printing time is shorter because of the actinic value of the lamp. There is a considerable saving in current consumption. Mr. Fies stated it is preferable to use filtered water to cool the tube rather than ordinary tap water to prevent accumulation of a brownish coating on the quartz tube which affects the efficiency of the lamp.

Frederick Salzer of the Hartford (Conn.) *Courant*, immediately following Mr. Fies' discussion, stated that flourescent lamps in his plant had been in use over a period of 14 months. On a 55 lamp installation in the pressroom alone there is a savings of better than 7000 w. over the former type of illumination. By installing 76 fluorescent units in the plant there is a saving of 9480 w. From 18 in. to 48 in. tubes are used.

Mechanical Superintendent Archie Burns of the New York *Herald-Tribune*, inquired about the effects of machinery vibration on fluorescent lamps. Mr. Fies suggested that where vibration did affect the lamps that shorter tubes be used, especially on presses.

In the discussion it was brought out that blackening of the ends of the tubes and short life of the starting switches has been experienced with d.c. tubes.

Mechanical Superintendent Cliff Penry of the Greensboro (N.C.) *News-Record*, inquired if longer flourescent lamp life would be secured by leaving the lamps burn during lunch periods and between shifts than would be the case if the lamps were to be turned off during these periods. Mr. Fies advised cutting off the lamps during lunch periods and between shifts.

In reply to a question by H. L. Kirkwood of the Decatur (Ill.) *Herald-Review*, Mr. Fies stated that a very good lighting value for makeup tables is about 40 foot candles.

Cooperation Between Advertiser and Newspaper

Next on the program was the topic: *Cooperation Between Advertiser and the Newspaper.* Leading off for the advertiser was Carl Chapin, Advertising Manager for Maurice L. Rothschild, Chicago retail store. *The Composing Room View* was presented by Bernard F. Garrity, Mechanical Superintendent of the Hartford (Conn.) *Times*. Ben Dalgin, Director of Art and Reproduction, New York *Times*, discussed *Value of a Contact Man Between Newspaper and Advertiser.*

This was the only topic related specifically to cooperation or coordination either within or without the plant on the entire program. Although each speaker spoke more or less from a localized viewpoint, it was brought out that each newspaper plant could profit from those viewpoints so far as their own particular plants are affected.

Speaking from a tolerant and good-natured viewpoint, Carl Chapin stated: "When I think of the badly marked proofs and the trust-to-God instructions we give you, yet see good advertisements in the papers the next day, I wonder how in hell you do it."

In relieving himself of two pet peeves affecting his relationship as an advertising man with newspaper composing rooms, Mr. Chapin said he believed in certain men doing certain advertising jobs. He doesn't believe in the prevelent

This group of Gannett newspaper executives were guests of John Fields III and P. O. Roberts at the Yar Club, during the Chicago A. N. P. A. Mechanical Conference. Those present were (fromt row, left to right): Jack Burke, Production Manager, Gannett Newspapers, Rochester; Stereotype Superintendent Adam Schreiber, Rochester Times-Union; Isadore Komiss, Rochester Democrat & Chronicle; President John Fields of Wm. C. Herrick Ink Co.; Chief Machinist Peter Easterly, of the Danville (Ill.) Commercial-News; Vice President P. O. Roberts of Herrick; Newspaper Pressroom Superintendent Walter G. Leamon, Danville (Ill.) Commercial-News; Earl N. Hughes, Utica (N. Y.) Observer-Dispatch and Press. Rear Row (left to right): Host Col. Yashencha; Publisher Fred Keefe, Newburgh-Beacon (N. Y.) News; Newspaper Pressroom Superintendent Robert G. Angell, Ithica (N. Y.) Journal; Mechanical Superintendent B. F. Garrity, Hartford (Conn.) Times; Pressroom Superintendent Joseph Addison, Hartford (Conn.) Times; Newspaper Pressroom Foreman John Mosher, Rochester (N. Y.) Times-Union; Composing Room Superintendent Joseph Estabrook, Utica Observer-Dispatch and Press; Wm. W. Spaulding, Albany (N. Y.) Knickerbocker News; Mechanical Superintendent Eugene Jagareski, Albany (N. Y.) Knickerbocker News.

Photo Courtesy of *Editor and Publisher*.

Tom, Dick and Harry method. If the same men work on the same account, they will come to know the desires of the advertiser," said he.

The other peeve mentioned by Mr. Chapin is in the difficulty sometimes experienced when an advertiser requests a paper to get an advertising mat from another paper. "Why is it," he asked, "that we must beg, plead and cajole you fellows when we make such a request? You always come through with the mat but you keep us in hot water waiting for you to make good at the last minute."

A Plan for Good Service to Advertisers

Mechanical Superintendent Bernard F. Garrity of the Hartford (Conn.) *Times*, discussed the *Composing Room View* in relation to *Cooperation Between the Advertiser and the Newspaper*.

Mr. Garrity presented in a clear cut manner what, in his opinion, is an ideal schedule for advertising copy deadlines for a 6 day evening paper exclusive of Sunday.

Monday advertising copy should be received not later than 8 p. m. of the preceding Saturday. Deadline for Tuesday copy should be 8 p. m. Monday night which likewise should be the deadline for Wednesday copy. Deadline for Thursday copy should be 8 p. m. of Tuesday night. Friday copy should not be received later than 8 o'clock Wednesday night. Saturday copy should not be received later than 8 o'clock Thursday night.

Mr. Garrity made exceptions in the deadlines in the cases of two classes of advertisers—theatres and food stores whose copy should be in at noon the day before publication.

Deadlines as outlined above enable the composing room force to catch up on feature editorial matter on Thursday and Friday nights for Saturday's paper since there isn't much advertising composition on Saturday.

"Some persons," said Mr. Garrity, "may feel that it is asking too much of the advertiser to get his copy into the composing room 48 hours in advance. Advertisers have been doing this with the Hartford *Times* for the last 13 years. These deadlines are lived up to every day by at least 95% of our advertisers."

Mr. Garrity then enumerated the cooperation which it is necessary for newspapers to give advertisers in order to maintain a deadline schedule. The points mentioned specifically by him and as practised by the *Times* are as follows: "All advertisers who get their copy into our composing room before 8 o'clock the preceding night should be entitled to a proof early in the morning. Working so far in advance, it is usually impossible for them to have their art work finished and the cuts made by the time they send their copy to the composing room. The advertiser receives a proof from us in the morning and receive their cuts from the engraver that same morning. We request that they have their first corrected proof back to our composing room by 1 o'clock on the same day it is received by them, accompanied by their cuts. If this schedule is lived up to by the advertisers we will have a proof back to him before 6 o'clock on the same day with his illustrations showing in the

Mechanical Executives and Manufacturers' Representatives at A.N.P.A. Mechanical Conference

1—Auburn Taylor, Pressroom Superintendent, Charleston (W. Va.) *Gazette*, and son Robert Taylor.

2—Oscar Roesen, President, Wood Newspaper Supply Co.; Joseph Donohue, Pressroom Superintendent, Cincinnati *Times-Star;* Leslie J. Griner, Mechanical Superintendent, Youngstown (O.) *Vindicator*.

3—Ralph H. Randall, Chicago Representative; Harry Porter, Vice President, and Louis R. Beck, Sales Promotion Manager, all of Harris-Seybold-Potter Co.

4—J. Harold Minton, Production Manager, Decatur (Ill.) *Herald and Review;* Charles Sullivan, Pressroom Superintendent, and Wm. B. Astor, Jr., Stereotype Superintendent of the Memphis (Tenn.) *Commercial-Appeal*.

5—Herbert Roth, Chief Machinist, Wausau (Wis.) *Record-Herald*, and E. A. Booth of E. A. Booth Rubber Co., Cleveland.

6—Edgar B. Flint, Howard Flint Ink Co.; A. H. Pruett, Circulation Manager, Charleston (W. Va.) *Gazette;* Leven Deputy, Mechanical Superintendent, Dallas (Tex.) *Morning News;* Kenneth Koessler, Secretary, Greater Buffalo Press; J. B. Kohler, Kohler System Co.; R. H. Flint, Howard Flint Ink Co.

7—Frank Barr, Representative, Dayton Rubber Mfg. Co.; W. H. Street, United American Metals Corp.; F. P. (Pete) Peters, Ass't Manager, Dayco Div., Dayton Rubber Mfg. Co.

8—Production Manager Al Lengel of the Oakland (Calif.) *Tribune* and John Donald, President of the New York Club of Printing House Craftsmen, who is also associated with *Journal-American*, New York.

9—George Cooper and Arthur Dressel of R. Hoe & Co.; Walter Ogden, Cleveland *Press* Pressroom Superintendent, and Edgar Mahar.

10—Maynard Wright, Stereotype Superintendent, Charleston (W. Va.) *Gazette;* W. E. Wines A.N.P.A. Mechanical Department Manager.

11—Joseph McMullen, Pressroom Superintendent; John Keating, Production Manager, and Harry F. Wrasse, Stereotype Superintendent, all of Milwaukee *Journal;* Paul Wines, Student, Carnegie Institute of Technology, Pittsburgh, Pa.

12—Robert Legleiter, Composing Room Superintendent; George Geist, Photo-engraving Superintendent; Earl Burwell, Stereotype Superintendent, and Joseph Donohue, Pressroom Superintendent, Cincinnati *Times-Star*.

13—Walter Hitch, Burgess Cellulose Co.; Karl Blasi, Photo-engraving Superintendent, and C. Frank Mann, Composing Room Superintendent, both of Louisville *Courier-Journal;* Wilford Coddington, Composing Room Superintendent, Youngstown (O.) *Vindicator;* George Mitchell, Pressroom Foreman and J. C. Steele, Stereotype Superintendent, Louisville *Courier-Journal*.

14—G. F. Law, Production Manager, Sam Jackson, Ass't Publisher, and T. J. James, Composing Room Superintendent, all of Oregon *Journal*, Portland, Ore.

15—Al P. Oberg, Composing Room Superintendent, Flint (Mich.) *Journal;* Francis M. Britton, Production Manager, Nashua (N. H.) *Telegram-Gazette;* Joseph J. Corey, Chief Machinist, St. Paul *Dispatch* and *Pioneer-Press*.

16—A. W. Oliver, Mechanical Superintendent, Fargo (N. D.) *Forum;* H. S. Devine, Pressroom Superintendent, Newark (O.) *Advocate;* Courtland J. Strang, Mechanical Superintendent, New York *Times;* L. J. Griner, Mechanical Superintendent, Youngstown (O.) *Vindicator*.

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proof. We then receive from him a second corrected proof. The understanding is that the second proof is for errors that we may have made in the composing room or any other minor changes, but no style changes are to be made on the second proof."

"Angles in advertising are here to stay," observed Mr. Garrity. "The advertising man should be careful in marking angles in the layout. The chief trouble with some advertising men is that they start an angle but don't know where to end it. The time to take care of angles is in the first layout."

His suggestion to advertisers with respect to marking corrections in proofs is to cut the proof into sections and paste each section on a separate larger sheet of paper, instead of marking all of the corrections on the original sheet.

Value of Contact Man

Ben Dalgin, Director of Art and Reproduction for the New York *Times*, was the last of the three speakers in the discussion on "cooperation."

Mr. Dalgin enumerated the problems of the advertiser and the newspaper. All the advertiser asks of the newspaper is to reproduce his advertisement to sell. Advertisers can't understand the faults or difficulties in the making of a newspaper. On the other hand, the production departments are faced with the problems of deadlines. Sometimes

VELO PROCESS IN NEWSPAPER PRINTING*

**Abstract of address delivered by Walter Huber of J. M. Huber, Inc., at A.N.P.A. Mechanical Conference, Drake Hotel, Chicago, June 10, 1940.*

THE Velo Process consists of printing with an ink that is solid at normal temperatures, but has the proper consistency for printing at somewhat higher temperatures, on a press equipped with suitably heated inking mechanism. The warm, molten ink freezes instantaneously on contact with the relatively cold paper, forming a sharp, brilliant, mar-resistant print.

Ordinary news ink dries by absorption. Velo, on the other hand, stays on the surface of the paper and freezes exactly where it has been deposited by the plates. The hardness of Velo can be controlled to quite an extent by its formulation. Velo is relatively mar-resistant.

Velo follows existing methods of printing except for the introduction of heat and some other minor requirements. No general change in technique is required, no change in the lead of paper through the press, no washups at any time except for changing from one color to another.

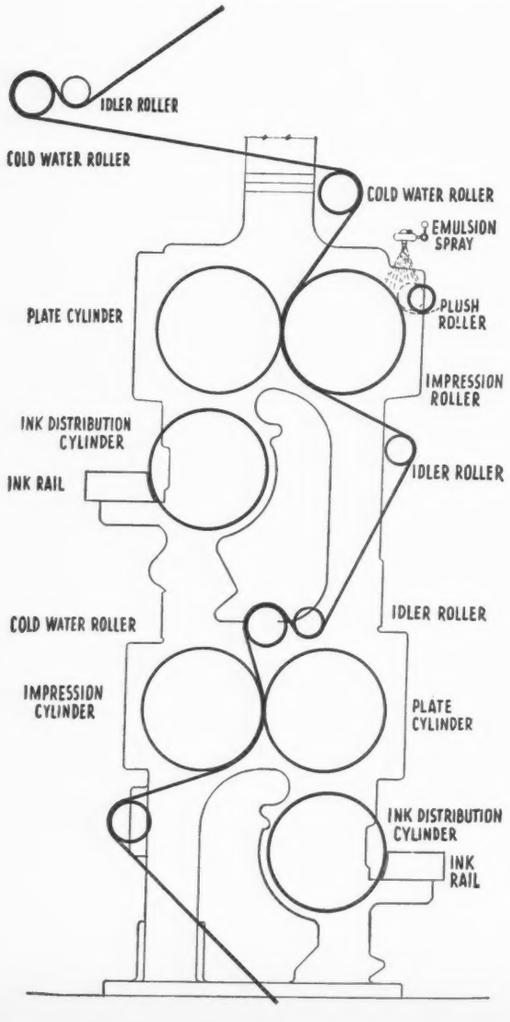
Velo freezes so instantaneously on contact with the paper, that it rests on the top layer of the topmost fibres. This action is so rapid that there is a definite pull, due to the change in consistency of ink on contact with the paper at the moment of impression, that the plates strip clean of ink. Fill-in from paper fiber that would occur with the use of fine screens on newsprint with ordinary ink will not take place with Velo.

Here is a brief description of how the Velo Process has been developed for *PM*[1] on some of the Hoe units of the Brooklyn *Daily Eagle*. The ink itself is melted in jacketed tanks, from which it flows through jacketed pipes to the ink pumps and rails. These likewise are jacketed. Water at a temperature of 245 deg. F., is circulated through these jackets and also through the ink drum, and the plate cylinder. This is heated by means of 12 holes each 2 in. in diameter concentrically bored around the shaft, through which the water is circulated.

Standard newspaper plates with ribs ½ in. apart do not give satisfactory heat conductivity. Those used by the New York *News*, with ribs ¼ in. apart give good results, but *PM* is using these close-ribbed plates with a particularly shallow groove between ribs, which give even better results.

Immediately after printing, the paper is passed over a cold water roller. Quick chilling produces a case hardening effect on the ink, thereby preparing it for the second impression.

Because of operating conditions existing in newspaper pressrooms including frequent stops for changing rolls, replating, etc., it has been found necessary to keep the second impression blanket moist by a fine spray of an emulsion that protects the first impression printing from adhering to it, owing to heat being transmitted to it from the plate cylinder when the press is on slow motion or has been stopped.



[1]New tabloid daily newspaper published in New York started publication Tuesday, June 18.

Ordinary newspaper press blankets are not designed for Velo, and deteriorate rapidly under the heat. We now use a finely woven cotton balloon cloth for a draw sheet. Beneath this can be carried the conventional rubber, monocork, or whatever blanket is desired. *PM* is using a synthetic rubber blanket.

The paper next moves over another water-cooled pipe roller, as rapid chilling makes the ink harder than slow cooling.

Since the sole purpose of Velo for newspaper printing is improved quality, we have equipped all points where frictional contact takes place, such as angle bars and formers, with air. By riding on an air cushion, deposit of ink is avoided.

With this equipment we have operated at over 30,000 impressions per hour for extended periods. Blankets, pipe rollers, angle bars and formers remained clean, and the quality of print was uniform throughout the run.

Patents covering the ink, the mechanical equipment, process and product have been applied for. We are planning to license recognized press manufacturers to make the mechanical changes.

We are also planning to license competitors on a reasonable basis. We believe that on general principles this practice will be beneficial to the ink and printing industries.

Coverage, of course, always depends on the amount of ink carried. With ordinary oil inks the pressman usually makes a practice of carrying as much color as possible without offsetting, filling in, and getting into first impression difficulties. With Velo the pressman must become accustomed to carrying not as *much* color as possible, but as *little* color as will produce the desired result. Otherwise he will put on excess deposits of pigment from which he will derive no benefit.

The amount of heat required for the *PM* installations has been calculated at 25-35 boiler h.p. for 8 units, and the water is circulated by a rotary pump driven by a 15 h.p. motor.

Velo seems indifferent to the kind of stock to which it is applied. The prints appear to be much the same whether printed on absorbent or non-absorbent stock. It requires no bulk of fibre to penetrate, no hard surface to keep it brilliant. Paper manufacturers have shown great interest in this new process, and no doubt will be glad to offer their recommendations.

so many instructions are given newspapers it seems that advertiser and newspaper are at opposite poles.

Mr. Dalgin stated a contact man should be a mature member of the staff. He should be given training in the newspaper plant and then should be trained from the advertiser's viewpoint.

MONDAY AFTERNOON

The plan of holding four simultaneous departmental clinics as initiated by Production Manager John A. Burke, of the Gannett Newspapers at the New York State Publishers Mechanical Conference in Rochester in 1938 was followed. Correlation meetings were held the following day at which time reports of the separate meetings were given by the chairman of each group representing the four major mechanical departments in the newspaper plant.

Composing Room Meeting

Principal highlight of the Composing Room Group meeting was Production Manager John P. Keating's description of the operation of the Milwaukee *Journal's* ad room. He illustrated each step in production by means of lantern slides showing actual views in the department.

John A. Burke, Production Manager of the Gannett Newspapers, Rochester, New York, was named chairman of the Composing Room meeting. Assisting were Leon A. Link, Production Manager of the Cleveland *Plain Dealer* and Wm. L. Fanning of the Westchester County Publishers, New York.

That composing room operation is still somewhat complicated and that composing room executives are conscious of the need for efficiency in handling the copy and cuts and at the same time keeping a constant check on the work as it flows through the composing room was evidenced by the nature of many of the questions discussed at the meeting. Perhaps in no other of the four clinic meetings was departmental management so much in evidence.

Comparative Production Records

Page or production costs, long a favorite topic among composing room executives, came to the front during the meeting. Most every composing room executive understands that page costs with those of other composing rooms are not comparable because of the differences in scale rates, methods used, volume of business, etc. At this meeting it was proposed that the A.N.P.A. Mechanical Committee work out through Manager W. E. Wines' office, a standard form for determining production only so that accurate comparisons may be made between the participating composing

(*Continued on Page 42*)

TECHNICAL LITERATURE

Miehle Vertical Broadside

Broadside published by Miehle Printing Press & Mfg. Co., illustrates and describes many mechanical improvements which have been made in the Miehle Vertical press. Running speed, 3000 to 5000 imp. per hr.

The Peignot Booklet

The Peignot, a new type drawn by A. M. Cassandre and cast by Deberney & Peignot in Paris, is illustrated and described by Continental Typefounders Association, Inc., in a 9¾ in. by 12½ in. booklet. Explanatory discussion is printed in the foreword. Specimen lines, of course, appear in the booklet.

Heat Control Methods

Twelve page illustrated booklet published by Mergenthaler Linotype Company, describes electric and gas heat control equipment for Linotype metal pots, as well as latest design of air-cooling for molds and the water-cooled mold disk.

Morr-Glos Inks

Geo. H. Morrill Co. Div. of General Printing Ink Corporation has published as part of its one hundredth anniversary celebration, a four-page bulletin in which are shown comparative specimen printings of Morr-Glos Inks in red, yellow, blue and black. Specific uses of the inks are enumerated.

Protect Pressroom Profits

A new 8½ in. by 11 in. fully illustrated catalog has been published by Printing Machinery Company. The catalog contains descriptions of all of the company's products related to bases and accessories, a discussion on letterpress printing — its present status and future promise, and discussion on precision and profits in the pressroom.

Electric Marker

Four-page illustrated bulletin describes Ideal Commutator Dresser Co.'s Electric Marker (distinguished from electric etcher) for marking machine parts, tools, etc. The Ideal Marker really is a small electric hammer making 7200 miniature cutting strokes per min. Special diamond point may be applied to the marking end of the tool.

Working of S.A.E. Nickel Alloy Steels

16 page bulletin. Data compiled from 34 leading fabricators. Covers effects of alloying elements, characteristics and applications, and heat treatment. Also practical instructions for machining, broaching, drilling, tapping, threading, milling, sawing, grinding, welding, and gas cutting.

Generator Without Concrete Foundations

The Korfund Co., Inc., has published a bulletin No. Ba-22, on the isolation of machinery vibration and noise. Illustrates and describes installation of 150 h.p., 4 cyl. Diesel generating unit without concrete foundation. Generator was mounted on Korfund isolators and stabilizers.

Fluorescent Lighting

Benjamin Bulletin No. 40 contains 46 pages of charts, diagrams, tables and photographs related to facts and data needed to determine how and where to use fluorescent lighting. Some of the illustrations show outstanding fluorescent lighting installations. A question and answer section gives data on fluorescent lamps and their operation.

For Streamlined Stereotyping

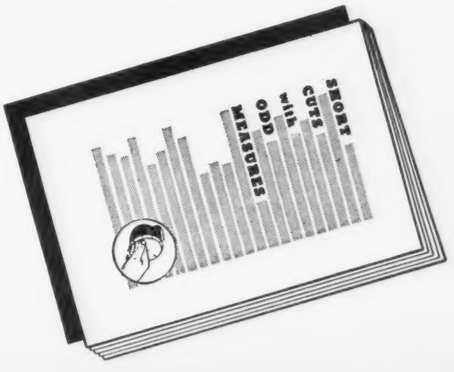
Six-page illustrated folder published by Lake Erie Engineering Corporation, describes the new streamlined direct pressure matrix press and its operating characteristics.

Ludlow Commerce Gothic

Four-page bulletin (illustrated) demonstrates uses of Ludlow's Commerce Gothics in business stationery printing. Specimens of all sizes and both weights are given.

Short Cuts with Odd Measures

Booklet published by Mohr Lino-Saw Co., discusses odd-measure composition, twin slugs, setting run arounds, inserted headings, overhanging lines and other tricky jobs. Although the text matter is concerned with automatic slug sawing on line-composing machines, much of the information is of interest to anyone concerned with machine composition.



Technical literature described on this page may be obtained by any reader. Send your request to Printing Equipment Engineer.

Attending the recent Lithographers' National Association Convention in Del Monte, Calif., early in June, were the following executives from Cleveland's Harris-Seybold-Potter Company (left to right): Secretary-Treasurer H. M. Hubbard; President R. V. Mitchell; Vice President in Charge of Sales Harry A. Porter; Vice President J. W. Valiant; Vice President Wm. Guy Martin.

Describes New Press Delivery

With a three column heading and a photograph, the *Post-Standard* of Syracuse N. Y. on April 21st used the first page of its second section to tell its subscribers all about the new Hoe press equipment which was then being delivered to the site of the new building at E. Fayette and Montgomery streets. A part of the story is as follows:

"Three adapted motor trucks bearing the last units of a new Hoe high-speed press arrived yesterday at the new plant of the *Post-Standard*.

"The job of shipping the all-steel press in units from the plant of R. Hoe & Company in New York was accomplished by these super-trucks in nine days.

"The largest single unit was brought to Syracuse on a special 14-wheel trailer and moved into its place as if it were a sewing machine. Eight other 18-ton units, including two high-speed folders, were delivered with equal facility.

"Installation of the new press is one of the major tasks in the complete renovation of the interior of the building formerly owned by the Syracuse *Journal*, which has been going on since the first of the year.

"The giant new press was first assembled at the Hoe Company's plant, tested thoroughly, and then shipped by units to Syracuse, where it was necessary to tear away a part of the east side of the building to move the massive steel units indoors.

"To house the new printing press, equipped with all the latest devices for newspaper publishing including the printing of pages in four separate colors, a new pressroom has been built in the center of the new *Post-Standard* building, extending from the basement to the second floor.

"The room is 85 ft. long, 30 ft. wide and 29 ft. high. A cast iron substructure, upon which the huge multi-unit machine rests, was erected in the new pressroom.

"With this new press it is possible to print 60,000 copies of a 48 page paper in an hour—with many of the pages appearing in four colors.

"Other innovations made necessary as a result of the new press installation are a complete new stereotyping equipment with special automatic two-tray conveyors for carrying of metal newspaper page plates from the second floor to the press and the installation of a miniature railroad system from paper storage room for the cartage of newsprint rolls to the new underfeed system of the printing press.

"More than 100 workmen have been engaged since the first of the year in making extensive alterations through the entire building, including the adaption of a new entrance lobby with a new elevator and a new public stairway to the second floor."

One of the new Hoe press units ready to be rolled into Syracuse (N. Y.) Post-Standard's plant.

ITCA Emblem Contest

The Trade Compositor, official publication of the International Trade Composition Association, is offering a $25 cash prize for a new emblem for the Association. Anyone may enter the contest inasmuch as it is not limited to typesetters. Closing date of the contest is August 31. Decision of the judges will be made as soon as possible after the closing date. Further particulars may be obtained from Editor William Lickfield, The Trade Compositor, M & L Publishing Co., 629 Chestnut St., Philadelphia.

Elect Officers

The Printers Supplymen's Guild of Chicago held its annual election May 17, and the following officers and members of the executive committee for 1940-1941 were elected:

President, William R. Joyce, The *Inland Printer;* Vice President, A. E. Handschy, Martin Driscoll & Company; Treasurer, Bernard Snyder, American Typesetting Corporation; Secretary, Charles Wallace, Economy Printers Products.

Fred P. Rosback Passes

Fred P. Rosback, Jr., secretary-treasurer of F. P. Rosback Company, Benton Harbor, Mich. has passed away. He had not been well since he had first been stricken with a heart attack in mid-February in St. Petersburg, Fla. He was 62 years of age. For 30 years Mr. Rosback had been prominent in Benton Harbor, and was one of the city's best known manufacturers. He was president

Fred P. Rosback, Jr.

of the Farmers & Merchants National Bank, and had been mayor and treasurer of the city and also an alderman. He worked hard to build up and expand the business established by his father, the late F. B. Rosback, Sr.

George K. Hebb Passes

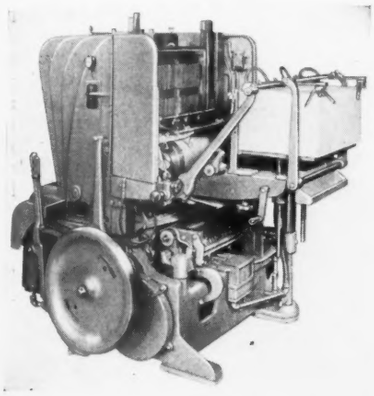
George K. Hebb, president of Evans-Winter-Hebb, Inc., Detroit, passed away May 16 at the age of 57. Mr. Hebb had been associated with the printing industry in Chicago, Grand Rapids, and for the last twenty-six years in Detroit. He was president of UTA in 1925.

Equipment

AND SUPPLIES

Model V-50 Miehle Vertical

Operating at speeds up to 5000 impressions per hour, Miehle Printing Press & Mfg. Co. announces the new model V-50 Miehle 14 in. by 20 in. Vertical which has been re-engineered and in which have been incorporated many new mechanical improvements. Among the claims made for the new machine are (1) Light-weight stocks are delivered at new high speeds; (2) A wider range of jobs can be handled because of the larger sheet size; (3) The new speed rating up to 5000 imp. per hr. is a practical speed.

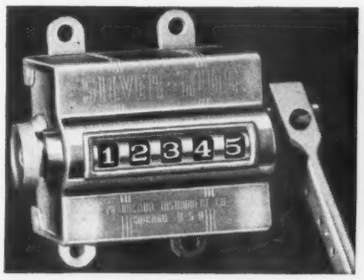


New Model V-50 Miehle Vertical is said to produce upwards to 5000 imp. per hr. Maximum sheet size is 14 in. by 20 in., upon which can be printed locked-in-chase type matter 12¼ in. by 19 in. two rollers or 13¼ in. by 19 in. one roller.

Some of the mechanical improvements incorporated in the design of the press are as follows: (1) New rear corner stock pile guide keeps top sheets square on the pile; (2) New manual control for raising or lowering the feeder blower nozzle while the press is running has been provided; (3) A ratchet stop prevents overthrow of the feeder pile raising mechanism; (4) Adjustable brushes hold sheet in positive register at front guide and yet allows movement for side guide register, thus eliminating the use of back stops, and pins; (5) Drop-blade ink fountain provides easier washup; (6) Safety lock prevents fountain swinging into distributing rollers when the rollers are lowered for washup; (7) A more rigid support for the delivery gripper raising and lowering cams has been provided; (8) New cam drive for delivery arms insures smooth delivery action at the increased speed; (9) Hi-Torque Kimble motor transmit plenty of power; (10) Bijur automatic lubricating system; (11) New cam control on delivery grippers for assured gripper bite at any speed; (12) Quick-set delivery air blast nozzles force the sheet to settle flat on the pile. Further information may be obtained from Miehle Printing Press & Mfg. Co. direct, or through *Printing Equipment Engineer*.

Silver King Counter

Features of the Silver King lightweight Mechanical Counter announced by Production Instrument Company, for printing press duty or duty on other machines requiring counting operations, are (1) Steel base and cover; (2) Unbreakable windows of reinforced plastic material shaped so as to avoid shadows; (3) Chromium plated case for easy cleaning; (4) One screw only is used in the counter assembly; (5) The number wheels are molded from black bakelite with figures in contrast for visibility; numbers are ¼ in. wide by ¼ in. high.



Silver King Counter's numbering wheels are molded from black bakelite; assembly is set within chromium plated steel case.

The counter is available in either knob or lock type reset. Five bakelite number wheels register up to 99,999. The actuating lever moves in a 33 deg. stroke for each count.

The over-all dimensions of the counter, including shaft extension and reset knob, but not including the actuating lever, are 3 15/16 in. by 4 15/16 in. by 2 3/8 in. high.

Manufacturer states that the first model of the Silver King was tested on a run at 60,000 per hour and on long runs at 36,000 per hour; and that although the counter has not been designed for these speeds, these tests indicate long life of the counter at normal press operating speeds.

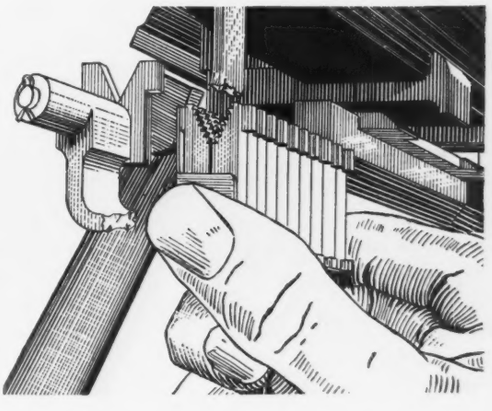
Larger Molding Machine

A larger model of ATF's precision rubber plate molding machine is announced by the Rubber Plate Division of American Type Founders, Inc. The new machine is equipped with a platen 24 in. by 24 in. size, for paper converters, paper box, papeterie, and bag manufacturers. Otherwise it is identical in appearance and construction with the 18 in. by 18 in. machine. The larger machine is powered by a ¾ h.p. motor, 208 or 220 v., 60 cy., 1, 2 or 3 ph. a.c. current. The base of the machine is 31 in. by 46 in. and the height 63 in.

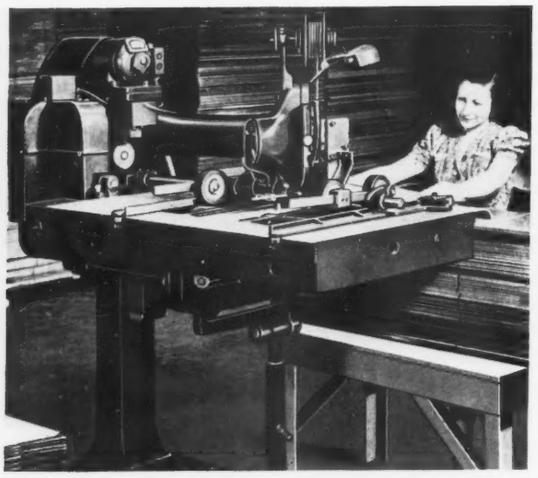
Dual Purpose Keyboard Pi Tray

Intertype Corporation is furnishing a keyboard pi tray for use by operators of line-composing machines. The original purpose of the regular keyboard pi tray has been preserved, *i. e.*, the tray may be used by the operator for depositing stray matrices or those which he removes from the assembler. In addition, the tray is used as a guide for "running in" the matrices when he has finished composition from the magazine in use. For this purpose, the operator picks up the pi tray containing the matrices, and because of the support furnished by the tray, the teeth of the matrices may be engaged easily with the second elevator bar rails.

The pi tray is L-shaped—one side is open. In the bottom of the tray a boss is provided. This boss is the exact width of the space between the upper and lower lugs on the reference side of the matrices. As the operator places each matrix in the pi tray it is automatically kept in alignment with the others for sliding the matrices from the tray to the second elevator bar.



By grasping the bottom end of this Intertype keyboard pi tray with the thumb and placing the index finger against the stray matrices, the operator can slide the matrices onto the second elevator bar without removing the matrices from the tray. The tray serves as a guide to keep the matrix teeth in alignment.



View of Morrison Side Seam Stitcher just recently announced by Seybold Division, Harris-Seybold-Potter Co. Designed to stitch manufacturers' seam in corrugated and solid fibre containers.

Morrison Side Seam Stitcher

For box and carton manufacturers, the Seybold Division of Harris-Seybold-Potter Company has announced development of the Morrison Side Seam Stitching Machine. The machine is designed to stitch the manufacturers' seam in corrugated and solid fibre shipping containers.

Maximum distance of the stitching point to the right gauge is 25 in.; to the left gauge is 18 in. (By removing left gauge manufacturer states there is no limit to distance from stitching point to left side of folded box. Spacing between stitches is adjustable from 1 in. to 2¾ in. Any number of stitches above 2 may be made. Maximum distance from stitching point to trigger is 14½ in.

The machine will stitch a manufacturers' seam on any box not smaller than 5 in. by 5 in., and not larger than having one side not more than 25 in. wide; the other side is unlimited; height of the box (manufacturers' seam) is also unlimited above 3½ in.

The standard speed of the Model SLS is 290 r.p.m. Greater speed can be furnished when required.

Changing the setup of the machine from one size box to another can be accomplished in from 3 to 5 min. The table is adjustable vertically but no adjustment is needed for small variations in stock thickness.

The upper pressure rolls are adjustable upwardly and away from the stitching line. The rolls are made of soft rubber. This makes it possible to feed stock of any kind of container material, corrugated or solid fibre, or any size box, without marking or deformation of stock. Feed and delivery pressure rolls are mounted on adjustable eccentric bushings for adjustment when changing from very thick to very thin materials.

Delivery rolls and trigger are in one assembly. The trigger can be adjusted relative to the rolls, but generally a change in trigger position is made by shifting the entire delivery roll assembly by means of a crank. When the delivery rolls are changed in position it is necessary to shift the delivery pressure rolls accordingly. The whole operation takes from 1 to 2 min.

Change in spacing between stitches is made by shifting the position of the connection at the lower end of the connecting rod which is connected to the main shaft outside of the flywheel at its upper end, and to the arm of the box feed clutch at its lower end. This arm is graduated and any desired change can be made quickly. No adjustment is required for changing the number of stitches.

Further information may be obtained from Seybold Division of Harris-Seybold-Potter, direct, or through *Printing Equipment Engineer*.

American Plasticplate

American Wood Type Mfg. Co. states its Plasticplate blocks are laminated wood block base surfaced with plastic composition cemented to the wood base. The blocks are type high. Clear, uniform impressions are claimed for this product. A further claim is that Plasticplates will not discolor ink. This material may be cut to size on any printer's saw. The plastic printing surface may be routed on a router or may be tooled by engraving. Company states Plasticplate material is good for 100,000 impressions.

Solid surface blocks are furnished in sizes ranging from 12 in. by 12 in. up to and including 18 in. by 36 in. A range of different sizes is also available in benday printing patterns. The company also furnishes Plasticplate material in rule form, ranging from 12 pt. up to and including 144 pt. in 24 in. strips.

Printed direct from engraved Plasticplate, a plastic surfaced laminated wood block.

Additional particulars may be obtained from American Wood Type Mfg. Co., direct, or in care of *Printing Equipment Engineer*.

New Electrotype Plate Process

Exclusively by a special electrotyping process, The Quality Engraving & Electrotype Company, announces an electrotype plate service for printers by which it is possible to print by letterpress an almost unlimited number of reproductions of an original image on one sheet from one pre-madeready printing plate. Plates can be supplied either in flat form or curved for rotary press printing.

While announcement of the plate service has been announced generally for the first time, the company states the process has been developed over a several-year period and has been in regular production use for more than a year in printing plants.

Little is known about the technique of the process at the present time, but repeat images are laid down on the plate by molding and stepping up in register irrespective of the number of colors. As many as 40 or more printed labels may be placed in gangs on one plate, each label an exact duplicate of the original engraving.

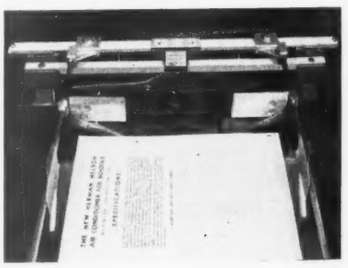
The process is applicable for use by large letterpress printers in producing labels, blotters, playing cards, cartons and direct mail literature. Sponsor states unlimited color combinations may be employed and the method is so flexible that changes of color plates of the original set can be introduced without difficulty.

The plates are furnished in the usual sizes including 24 in. by 28 in.

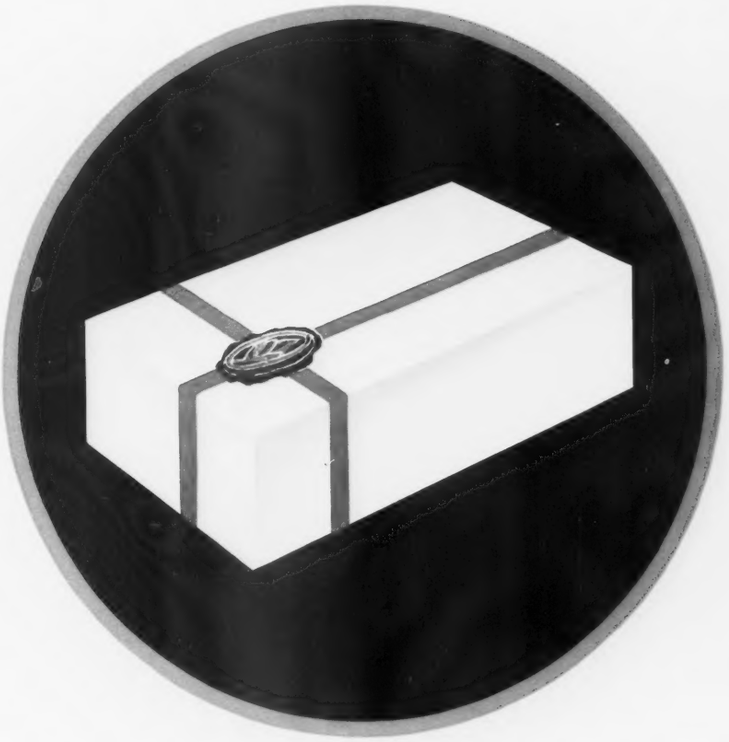
Further information may be secured from The Quality Engraving & Electrotype Co., direct, or in care of *Printing Equipment Engineer*.

Angular Jogger for Miehle Vertical

Chicago Printers Machinery Works has recently announced an angular jogger for Miehle Vertical presses. This device is claimed to embody several new principles of jogger construction. The angular movement of the jogging bars



disengages all four jogging pads from the sheets. No adjustments necessary other than positioning the slides to the sheet size being run. The mechanism of the jogger is actuated by a casting clamped to the rear of the press bed. To install, the jogger also is clamped to the press by four bolts without alterations in the press itself, after removal of the present support bar and lowering the jogger downwardly over the two press uprights. The jogger, it is claimed, facilitates production on work-and-turn forms and in preparing printed sheets for trimming and bindery operations.



Champion

KROMEKOTE

KROMEKOTE is the result of eight years of careful research and experiment by Champion, the world's largest manufacturer of coated papers. During this time, the best technicians in the paper business have sought to perfect a revolutionary and practical method of putting a higher gloss on coated paper. For several years Champion has had machines in production, striving for an efficiency that would make Kromekote a commercial product.

The enthusiasm with which Kromekote has been received by package manufacturers is sufficient proof of the success of this Champion process. For the first time a manufacturer can secure a coated sheet which combines extremely high finish and remarkably fine printing qualities. Kromekote is made in attractive shades which are clean, solid, and mirror-like in their depth of surface, and remarkably free from mottle.

Kromekote is unusually free from cracking or chipping, and the body stock is properly sized for pasting on setup boxes. In actual box manufacture, Kromekote wraps well on all types of automatic wrapping machines and stripping boxes. It prints beautifully, and colors are commercially fast to light and free from run or bleed.

Kromekote is a fine printing paper, yet it is more than that. Here is a covering worthy of the most beautiful boxes for gifts, candy, stationery, perfume, cosmetics, and all other products which require the setting that only an attractive package can give.

Kromekote is an exclusive, patented product of Champion. It has a real affinity for ink and prints like Champion's other fine papers. The economy of printing is another advantage of Kromekote.

This paper now is made in white, ivory, primrose, canary, light pink, orange, light red, light blue, turquoise blue, deep blue and pale green. Additional colors are being developed as rapidly as possible.

Kromekote is finding an additional market in the printing of high finish labels.

Kromekote has many possibilities in the printing, packaging and labelling industries.

We shall be glad to send samples if you will address your request to The Champion Paper and Fibre Company, Hamilton, O.

Four color illustration courtesy of House & Garden, copyright The Condé Nast Publications, Inc. Bruehl-Bourjes Photo, Condé Nast Engraving

Champion KROMEKOTE *is Available in*

BOSTON, MASS.....K. E. Tozier Company
Chas. W. Williams & Co., Inc.

CHICAGO, ILL.....Dwight Bros. Paper Co.
Chas. W. Williams & Co., Inc.

CINCINNATI, OHIO.....Queen City Paper Co.

NEW YORK, N. Y.....Holyoke Coated & Printed Paper Co.
Royal Paper Corp.
Chas. W. Williams & Co., Inc.

PHILADELPHIA, PA.....Garrett-Buchanan Co.
Matthias Paper Corp.
Whiting-Patterson Co., Inc.

ROCHESTER, N. Y.....Paper Service, Inc.

ST. LOUIS, MO.....Butler Paper Co.
Shaughnessy-Kniep-Hawe Paper Co.

THE CHAMPION PAPER AND FIBRE CO.

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NEW YORK, CHICAGO, PHILADELPHIA, CLEVELAND, BOSTON, ST. LOUIS, CINCINNATI

This is basis 20 x 26—33 Printed in U. S. A.

Champion's Kromekote

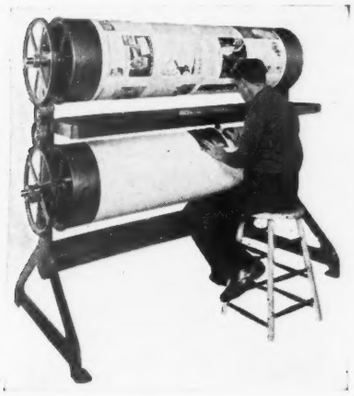
Kromekote is a new coated paper recently developed by The Champion Paper and Fibre Company. In addition to the Kromekote Cover, used on this issue of *Printing Equipment Engineer*, this paper is available in Box Wrap, Label, Postcard and Litho through regular Champion distributors.

Kromekote has been developed by Champion after nine years of research work. The following technical data is furnished by Champion for those using Kromekote in the printing plant:

(1) The high finish suggests the use of the paper for many types of printed material. This high finish does not detract from the easy printing qualities of the paper. (2) The paper possesses good absorption for printing inks and easy printing and handling qualities in the print shop. (3) Works well with standard printing inks; can be printed with gloss ink and a recently developed type of ink called semi-transparent or transparent, permits retention of the gloss of the coating itself. (4) Kromekote should be handled in the same way in which regular coated paper is handled.

Curved Plate Registerscope

Using a specially prepared transparent mirror embodying the same principle used on the flat-bed Registerscope, the Taylor Machine Company has brought out a Registerscope for locating curved plates. As shown by the illustration, the top cylinder carries the copy. The operator, viewing the bottom cylinder



New model Taylor Registerscope is used for Registering curved plates for rotary presses.

through the transparent mirror scanning plate, sees a reflected image of the copy on the face of the lower cylinder on which has been placed a sheet of paper. By scribing lines around the plates which are located by the image of the copy, the positions of all the plates are marked on the paper. This sheet is transferred to the printing cylinder of the rotary press, and serves to locate the plates. If the paper is left under the plates, openings are made for the insertion of hooks. Another method is to remove half the paper under a plate, locate the plate by the remaining lines, insert hooks to secure the plate, remove the remaining portion of the sheet, and insert the balance of the hooks.

An advantage of this machine is that it enables all the plates to be located before being put to press, and any necessary trimming and cutting to make space for hooks is done by using the Registerscope, thus saving standing press time.

If proofs in all colors are attached to the copy, the plates for all color cylinders can be located and the sheets and plates set aside until the press is ready for plating.

EXECUTIVE ¶s

Will Be a Professor

LAURANCE B. SIEGFRIED, editor of the *American Printer* since 1929, and nationally known authority in the fields of printing and advertising, has been appointed to a new task carrying a three-way responsibility. He will be associate professor in the School of Journalism at Syracuse University, printer to the university, and managing director of the Orange Publishing Company, university affiliate. At the School of Journalism Mr. Siegfried, who will join the university's staff Sept. 15, will have charge of the course in magazine editing and publishing.

During the 27 years since his graduation cum laude from Harvard University, Mr. Siegfried has been connected with several of the East's best known printing and publishing firms and has served half a dozen magazines in editorial capacities.

In 1931, 1932 and 1939 he was the reviewer of the Tileston & Hollingsworth Company calendar and gave the review before thirty graphic arts groups.

In addition to many periodical articles, Mr. Siegfried's publications include a volume on "Typographic Design in Advertising," and the chapter on types and typography in "The Handbook of Advertising," McGraw-Hill, 1938. In 1929, he compiled, laid out, and supervised publication of the 142-page specimen book of types of the Continental Typefounders Association, New York.

John A. Axner, who has served the printing department of the Philadelphia (Pa.) National Bank as general superintendent for a period of more than 25 years, passed away recently. His place has been filled by John J. Jones.

John Holland, advertising manager of the Hygrade Sylvania Corporation, Salem Mass., recently has been moved, with his advertising department to 500 Fifth Avenue, New York.

Raymond J. Richardson, until recently composing room superintendent, is now Production Manager of the Memphis (Tenn.) Publishing Company.

M. George Martin, Production Manager of the Louisville *Courier-Journal*, is recovering at his home, 1925 Strathmore Blvd., after a recent operation in a Louisville hospital.

Foreman of the Machinery Department Bernard Espelage of the Printing Machinery Company, Cincinnati, was chosen the "ideal father" in a city-wide contest conducted in conjunction with Father's day in Cincinnati. Mr. Espelage has been associated with the Printing Machinery Co. since March 1914 and is the father of seven children. His wife has been an invalid for many years but he has raised a family of healthy normal children. He owns his own home.

Fred Hudson, formerly associated with the production department of the Chicago *Herald-American*, is now with the Engineering Department of the Technical Trade School, at Pressmen's Home, Tenn. W. G. Burrows, formerly traveling engineer of production and printing, has retired.

Detroit Observes 500th Printing Anniversary

A celebration in honor of the 500th anniversary of the invention of printing from movable type was celebrated at the Hotel Statler, Detroit, Thursday, June 6. The celebration was sponsored by the Typothetae Franklin Association. Five hundred persons identified with Detroit's graphic arts and associated industries participated.

Appointed Distributors

J. C. Dunn, General Sales Manager of Vulcan Proofing Company, has announced the appointment of Allen B. Croke Company, 163 Oliver St., Boston, Mass., as distributor for the Vulcan Proofing Company's rollers and blankets for offset-lithographers and rollers for letterpress printers.

Textype Bold With Italic

C. H. Griffith, Mergenthaler vice-president in charge of typographic development, announces that Linotype Textype Bold with Italic is now available in the 6, 7, 8, 9, 10 and 11 point sizes.

"This combination," says Mr. Griffith, "is designed for a wide range of catalog and commercial printing, particularly for textbooks and church publications. Many plants are using it as a companion bold face for Textype with Italic and Small Caps."

Presented here is a brief showing of the 10 point size of Textype Bold with Italic.

Here is a brief showing of the 10-point size of the new Linotype Textype Bold with *Italic*. *Good design is always practical design. And what we see in a good type design is, partly, its*

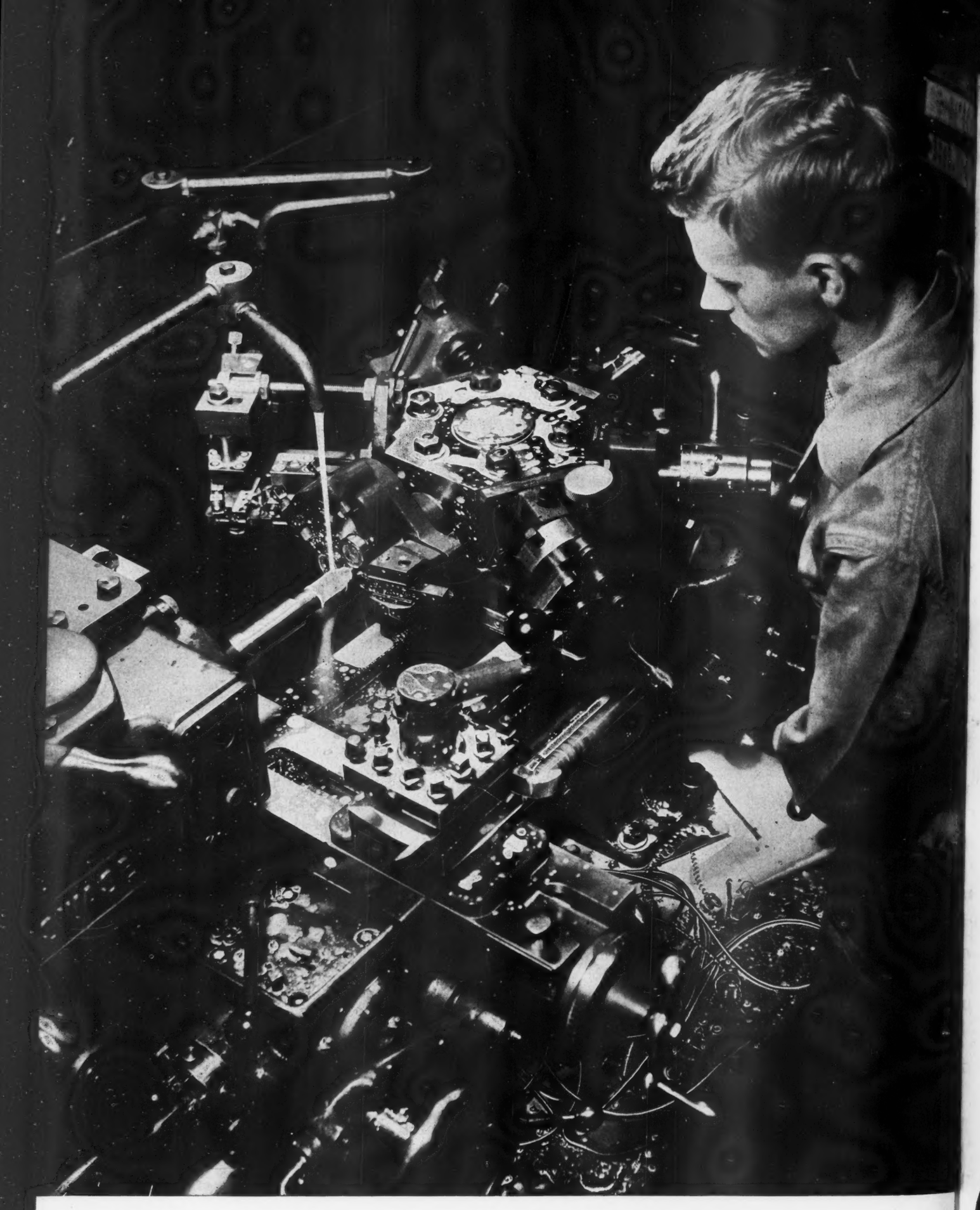


Plate I—A halftone print direct from a magnesium plate.

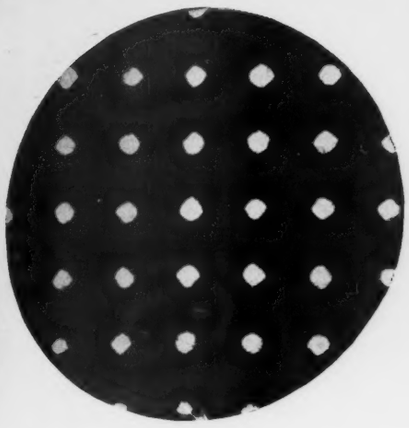


Fig. 1

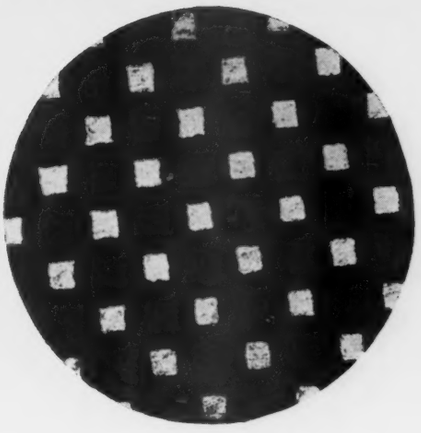


Fig. 2

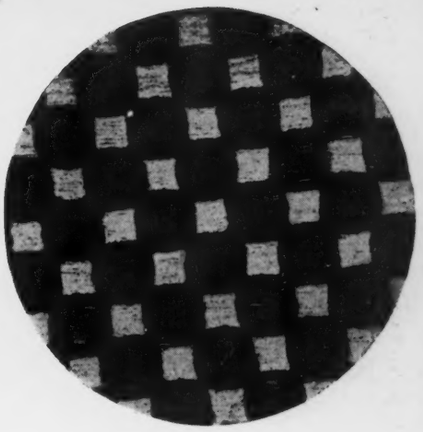


Fig. 3

Figures 1, 2 and 3 are plan view of original etched surface of zinc (Figure 1), copper (Figure 2), and magnesium (Figure 3). 27X.

MAGNESIUM ALLOYS . . .

for Photoengraving

By ROBERT T. WOOD*

**Metallurgist, American Magnesium Corp., Cleveland. Reprinted by permission of Metals and Alloys, Reinhold Publishing Corporation, New York, N. Y.*

THE purpose of this article is to summarize recent experiments to determine the possibilities of magnesium alloys for photoengravers' plates, or etching plates as they are sometimes called.

Magnesium alloy etching plates in small sizes called "Klichees" have been used in Germany for at least 10 years and during the last 2 or 3 years their use has greatly increased. Samples of recent work done with magnesium alloy etching plates in Germany prove that, when the proper technique is employed, the results have a high order of artistic merit. Halftone prints from magnesium alloy plates appear to have more "life" than similar zinc plates and some competent judges have asserted that for certain types of work magnesium alloy plates make more "brilliant" reproductions than copper plates. Magnesium alloy plates seem to be especially effective where sharp contrast in tone is desired.

The work here reported was undertaken by the American Magnesium Corp. to determine whether photoengravers' plates constituted a sound application for magnesium. A preliminary survey revealed that the problem was not easy either from the metallurgical or economic viewpoint. An entirely unknown factor was the reaction of the photoengravers to a new metal entailing changes in established practice.

Alloy Composition

While the work to produce sheet of satisfactory quality was in progress, tests on the etching characteristics of various alloys in sheet form were made. An alloy that would deep-etch with a clean, smooth bottom was sought. The best results were obtained with an alloy containing 3 per cent aluminum, 1 per cent zinc, balance magnesium.

Plate Preparation

It was found that magnesium plates must be scrubbed with a paste of pumice moistened with a 10 per cent solution of ammonium bichromate in water. The ammonium bichromate inhibits the reaction between the freshly cut magnesium alloy surface and the comparatively impure tap water used in most localities. The use of ammonium bichromate is especially necessary when the water supply is high in chlorides.

After thoroughly scrubbing the surface of the magnesium plate with the bichromated pumice, the pumice is removed by flowing and brushing the plate with a 10 per cent ammonium bichromate solution. After the excess bichromate solution is drained away and the plate very briefly rinsed, it is ready to be coated with the light-sensitive enamel or "top."

Tests showed that reproductions of line-cuts or half-tones on magnesium plates may be accomplished by employing glue, shellac or albumin tops. There are many formulae for making cold top and many of them are unsuitable for use on magnesium because of reaction with the magnesium during the heating operation that dries the top on the plate. Cold top enamels that are strongly ammoniacal appear to be especially reactive.

In most instances, plates are printed and developed immediately after coating but, if so desired, magnesium plates may be coated and stored as long as zinc or copper plates in a dark room. The so-called "dark reaction" is not accelerated by magnesium.

Plates coated by either hot top or cold top are printed in the regular manner by exposing them through a negative to ultra-violet light. Printing times of 5 to 10 minutes have been successfully used for magnesium plates. There is some indication that a slightly longer printing time is desirable for magnesium plates as compared to copper plates, but a skilled operator can soon determine the proper

Figures 4, 5 and 6 are cross-sections of original etched surfaces of corresponding metals in Figures 1 to 3. 27X.

Fig. 4

Fig. 5

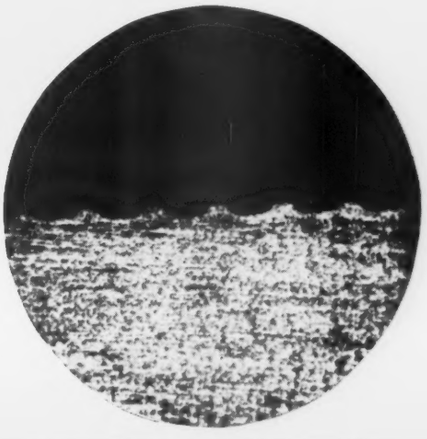
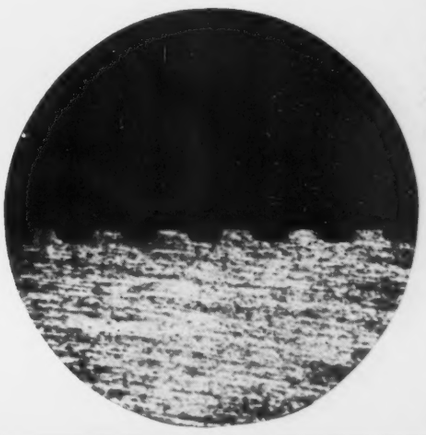


Fig. 6



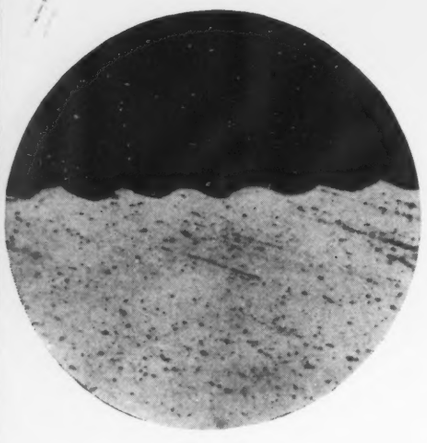


Fig. 7

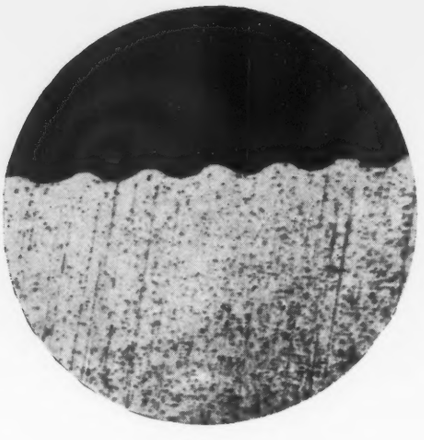


Fig. 8

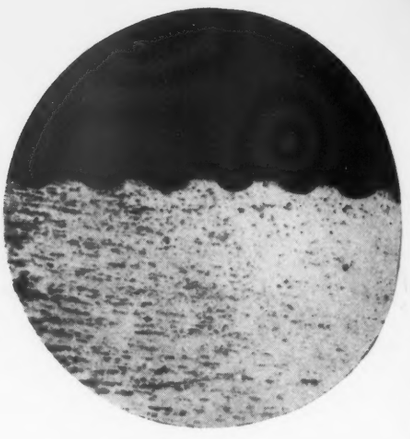


Fig. 9

Figures 7, 8 and 9 are cross-section of etched surface of same metals after 54,000 prints. 27X.

printing time for his particular machine after making a few plates.

It was found that magnesium plates coated with hot top may be developed in the same manner as copper or zinc plates without any special precautions but magnesium plates coated with cold top may be ruined by leaving them in the alcohol too long or in the water too long. Either will cause the top to swell and lift off.

When burning in magnesium plates, it is usually desirable to harden the hot top prior to burning in. This step is frequently omitted when processing copper plates that are to be etched electrolytically in ferric chloride but nitric acid, the etchant used for magnesium, tends to "rot" some hot top enamels and, consequently, hardening is advisable to prevent this. Hardening baths containing ammonium bichromate, chromium alum, alcohol and water were found to be satisfactory.

During hardening, the bath is kept continually in motion in order to avoid small bubbles adhering to the plate. When a gray precipitate has formed on the uncoated portions of the plate, the glue is sufficiently hardened. Before burning-in, the hardened plate should be thoroughly rinsed with water and dried.

Magnesium plates withstand the burning-in operation without distortion and, because of the high melting point of the alloy (1160°F.) compared to that of zinc (786°F.) ,it will withstand abuse during burning-in better than zinc.

Etching

A few tests showed, however, that the acid concentration used to etch zinc reacted too vigorously with magnesium. The most suitable etching solution for magnesium consists of 1 part 40 deg. Bé nitric acid to 15 or 20 parts water. Even with this dilute acid, etching proceeds very rapidly and an etcher usually overetches the first few plates attempted.

The various steps in etching magnesium such as powdering up with dragon's blood between bites are the same as for zinc. It may be desirable in some instances, however, to protect high light dots with an asphalt resist after the first etching or "bite." When the copy is a combination half-tone and line-cut and deep etching is necessary, the half-tone portion of the plate should be protected with asphalt. In other cases, it may be advisable to reinforce the whole top with an ink resist after the first bite.

For a given subject, the time required in the etching machine is about half that required by a zinc plate. With reference to copper, the time saved is, of course, much greater.

The same ratio of time saved also holds for the re-etching or hand etching step for high grade work. At the present time, copper is preferred by the trade for high grade work where good detail and fine shading is desired. The reason for the better results obtained with copper as well as the reason why reproductions made with magnesium plates are at least equal to those made with copper plates is illustrated in Figures 1 to 6 inclusive. These figures are photomicrographs at about 27 diameters of identical spots on unused plates of zinc, copper and magnesium. Figures 1 to 3 inclusive are plan views while Figures 4 to 6 inclusive are corresponding cross-sections. The plates from which these photographs were taken had all been etched according to standard procedure for each of the metals but no re-etching had been done.

The deformation of the individual dots in the zinc plate (Figure 1) is most conspicuous. Instead of having sharply defined outlines, their form is irregular, which will naturally affect the quality of printing. This is further illustrated by the cross-section view in Figure 4, which clearly shows the surface of the dots to be rounded off, eroded or sloping thus causing the irregular pattern observed in the plan view.

The copper plate (Figure 2) has dots which are considerably more uniform than those of the zinc plate and the tone values are, therefore, reproduced with greater fidelity. The cross-sectional view (Figure 5) shows, however, insufficient depth of etching, calling for subsequent deep-etching. This operation requires additional time and may damage the high lights unless the work is done with great care by an experienced operator.

The dots in the magnesium plate (Figure 3) show contours equally as sharp as those in the copper plate and the gradation of tone values is as completely retained as in the copper plate. The cross-section view of the magnesium plate (Figure 6) shows the uniformly good depth of the depressions. Such depth of etching cannot be produced in copper or zinc without subsequently deep-etching.

It must not be assumed that copper and zinc plates with sufficient depth of etch are not regularly produced. The foregoing merely brings out that sufficient depth of etch is more quickly and more easily obtained in magnesium plates.

Repairing Damaged Plates

Completely etched plates frequently must be repaired or touched up with graving tools before a satisfactory proof is obtained. The plate may be scratched from careless handling or a small defect in the top may have resulted in one or more missing dots. In color work, the match may not be perfect and portions of one or more of the plates may have to be cut out and soldered into correct position. Long experience and great skill have perfected methods of making such repairs on copper or zinc plates.

Although the same methods used to bevel and rout copper and zinc may be used equally well on magnesium plates, repairing and soldering require an entirely different technique. For instance, a small scratch or a few missing dots in a copper plate can be easily repaired by raising small burrs with a sharp pointed tool in the locations dots should be. These burrs are then burnished level with the general surface of the plate and the dots shaped to proper size by a graving tool. This operation is quite difficult with magnesium because the burrs tend to break off if a row of closely spaced dots must be raised. Isolated dots may be raised with a tool and rubbed down to correct level with sufficient skill but large defects are best repaired by soldering followed by graving the soldered area to correct tone value.

The soldering of magnesium plates requires a different technique than that used for copper or zinc but effective soldering is not especially difficult. A special solder is used and the magnesium surfaces to be soldered are "tinned" before complete joining is effected. One satisfactory solder contains 72 per cent tin and 28 per cent cadmium (AMC Solder A). No flux should be used. To "tin" the magnesium surfaces successfully, they must be clean and bright and the temperature of the magnesium must be above the melting point of the solder. A small wire brush used to abrade the

(*Continued on Page 36*)

an Improved
Miehle Vertical?
What can that mean?
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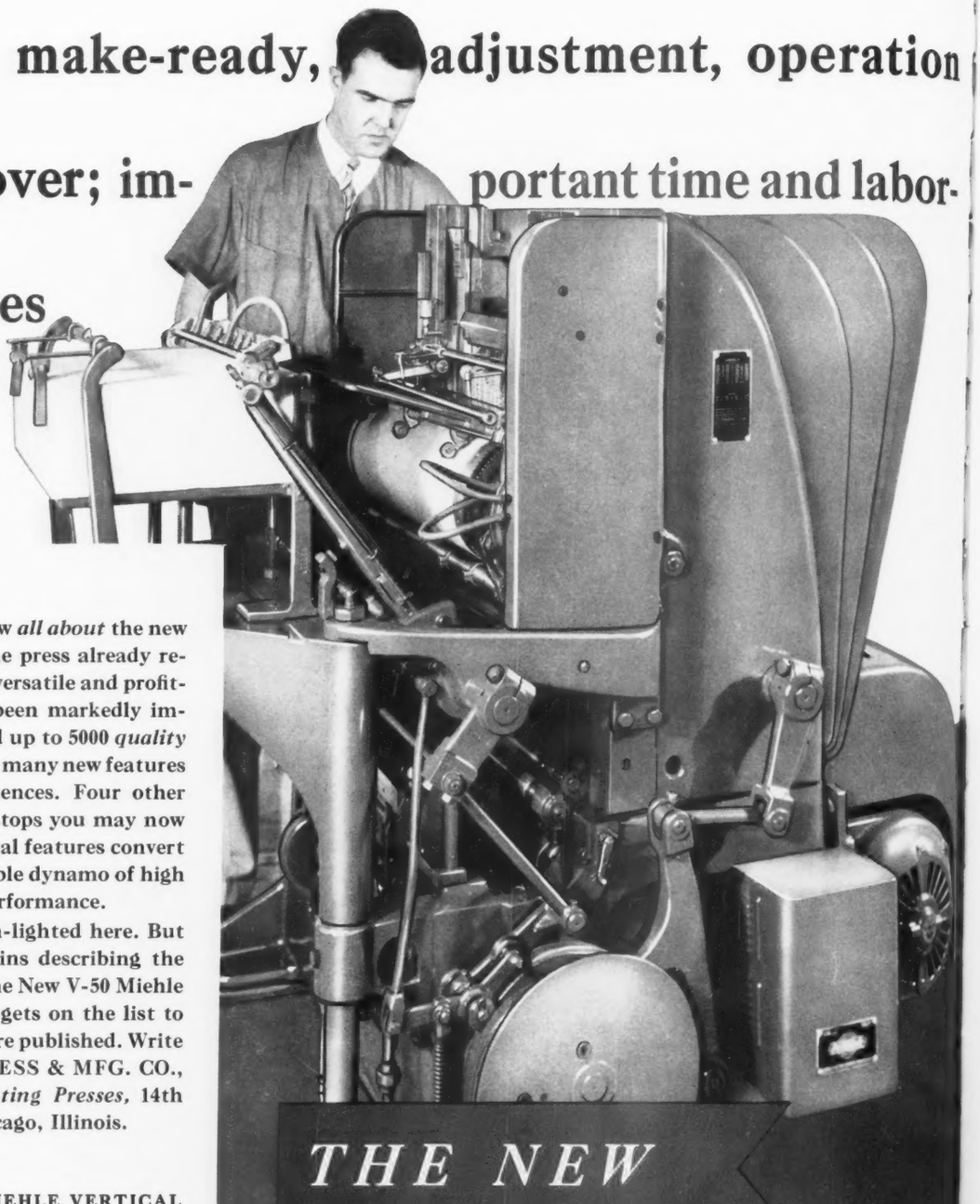
11% more salable production per hour*; new convenience in make-ready, adjustment, operation and change-over; important time and labor-saving features



* *Compared to fastest previous Miehle Vertical. Even greater increase compared to slower presses.*

No printer can afford *not* to know *all about* the new Model V-50 Miehle Vertical. The press already regarded as the most productive, versatile and profitable in the industry has now been markedly improved. It offers a running speed up to 5000 *quality* impressions per hour. Five of the many new features provide new operating conveniences. Four other improvements eliminate press stops you may now take for granted. Seven additional features convert the Miehle Vertical into a veritable dynamo of high speed, smooth, "job-eating" performance.

Some of the features are high-lighted here. But if you have not received bulletins describing the performance and operation of the New V-50 Miehle Vertical, make sure your name gets on the list to receive them all, as fast as they are published. Write today. MIEHLE PRINTING PRESS & MFG. CO., *Builders of World Famous Printing Presses,* 14th Street and Damen Avenue, Chicago, Illinois.

HIGHLIGHTS OF THE NEW MIEHLE VERTICAL

1. New external control permits raising and lowering of feeder blower nozzle while press is running.
2. New adjustable register brushes eliminate necessity for back stops, pins and other time-wasting devices.
3. New Bijur automatic oiling system assures adequate lubrication at vital points, reduces oiling time.
4. New quick-set delivery air-blast nozzles and new delivery cam drive are just two of many features contributing to high-speed performance.
5. Drop-blade takes the "grief" out of ink fountain wash-up.

THE NEW

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REPRESENTATIVES RESPOND TO REPORTER'S RESPECTS

At Chicago's A.N.P.A. Mechanical Conference

WHAT a Conference! You men who didn't go to Chicago missed one of the finest A. N. P. A. Mechanical Conferences ever held.

With several hundred supply men represented, it is impossible to mention everybody who was there, but here goes our little trip through the exhibits.

As usual, we were greeted each morning in the exhibit hall by our old friends, **Scotty Campbell** and **Bill Grenier** and a delectable Miss New England. This year it was carnations, pipes and tobacco—did you say pipes and tobacco? Yes, we did, and quite a few of the boys had a smoke on New England. **Ed Vandercook** was much in evidence at the Vandercook booth demonstrating proofing equipment.

Nearby, Rapid Roller of Chicago with "old Pappy Happy" did duty in attracting attention to Rapid Mercury products. Across the way, **Ed Mills** was handing out his 1940 catalogs and slipping the boys a nice little pearl-handled knife. Some of the boys found a use for the knife when they got to Angle Steel Stool Company's booth where **Norm Sherburne** was giving out pencils and demonstrating a Linotype operator's chair. Not too far away from the entrance, **Charlie Davis** of Lake Erie Engineering was extolling the merits of Directomat.

Every once in a while you run across a man who considers his wife a real pal, even when it comes to Conventions. **Dave Robertson** of R. R. Robertson Company, told us that his charming wife had been attending Conventions with him since 1922.

We were sort of eavesdropping at the Linograph booth where we had a couple of honest chuckles listening to **Clay Murray** demonstrating the Linograph to a couple of religious gentlemen of foreign extraction.

Just in case some of the boys were inclined to do a little gambling, **Harold Burns** was supplying "put and take" tops with positive instructions not to gamble but to demand Edes Roto-Grip finish. What is a Mechanical Conference without **John King** of Ludlow? We stopped to chat and one of the interesting things he showed us was the new machinist's accessory case for the Elrod. The present popularity of a piece of equipment goes a long way in making friends for that equipment. This was brought to our mind by the electrically operated map of the United States showing the places where **Johnstone's** electric etchers are in operation. Believe us, there were quite a few lighted spots on that map. Just about two of the hardest working suppliers at the Convention were **Lee and Van** in the Hammond Machinery Company's booth.

Another old friend we met was **Frank Barr** representing Dayco rollers who was busy telling the boys that Dayco is now distributing its own rollers. Nothing seems to wipe the smile off Frank's face. **Charlie Fritschi** of Stereotex, tells us things are progressing nicely. This year Miss New England had a little company, for another pretty girl was on the job for **Jerry Michell** at the Sovereign Oil Company's booth. This young lady passed out handy folders featuring Sovereign press gear lubricant. It was our good fortune to "cock an elbow" with the Sta-Hi crew—**Al Cochran, Don Richards and Craig Baker.**

Time after time we encountered the **Rouse-Knoll** butterflies who were flitting from booth to booth laying their advertising match books and when they weren't flitting they were demonstrating Rouse equipment. The Imperial army headed by **Clarence Seaman** kept Imperial's type metal and zinc booth buzzing and the onlookers awed with the spectroscope peep show.

The Goss Printing Press Company had an interesting display, but what attracted us most was a big sign which **Bob Corlett** explained showed the work in process at Goss. We called at the Tingue Brown booth and found **Sanborn and Hart,** but we missed **Mr. Foster.** Every so often—or oftener—as we strolled through the exhibit aisles we were required to step aside for **George Morrison** who came speeding down the aisles pushing the new baby buggy C.&G. Saw Liner. The team of **Mason** and **Laavy** spent many hours demonstrating to visiting executives in the Klean-O-Mat exhibit.

Roy Manny of the Atlantic Zinc Company had his usual interesting display and greeted his many friends. The father and son act of Stickum & Rollum was very much in evidence. In case you don't know, we mean **Ernie and Roy Booth** with their Zink Cut Cement and rubber keyboard rollers. At the sign of the pig's ear we found **Bill Street and Ed Peterson** and this year I believe for the first time was **L. Muscat** the genial president of United American Metals. We missed **Arthur Levy.** Other newcomers to us were **Seymour and Jack Pass** of the National Steel and Copper Plate Company. With them was **Adolph Bessman.**

No exhibit is complete without a movie so we accomplished three things at the Matrix Contrast booth. We saw the story of the Black and White Process, eased our bunions in a luxurious chair and chatted with **Charlie Stout** and **Cliff Yewdall.** An attractive display to our way of thinking was that of the Federated Metals Company where those two friendly souls **Jack Moran** and **Vincent Ryan** held forth. There was plenty of interest shown at the Ostrander-Seymour booth where **Harry Phelps** and **Walter Alberg** demonstrated the rotary head plate shaving machine. One of these days we hope to go to a Mechanical Conference and find the "other" Bendow brother. This is in spite of the fact that we always see **Emil Bendow** of Linotype Parts Company. Several times we stopped at the Harold Pitman booth where the Rolup process was being explained. We hoped to see **Kenneth Newell,** but we missed him. **William Chatfield** and **Peter Schotanus** did the honors at the Rapid Electrotype booth.

There were many other manufacturers of equipment and supplies whom we enjoyed meeting again. Two in particular went around with broad smiles on their faces—they were **A. J. Cline** and **Jack Parks.** If you ever want to spend an interesting half-hour have a chat with **Guy Hammond** of Black Rock and ask him about the intricacies and difficulties in selling foreign markets in war times. During a Mechanical Conference it is a difficult matter to talk to **Ed Niles.** It seems to us like he always has a group of friends in tow. Even a roving reporter needs to get out at times and so we went to dinner with **Walter Morey** of Teletypesetter.

We spent a little while up in the rooms of R. Hoe & Company where we met some of the Hoe executives, particularly **Arthur Dressel** and **George Devyr.** We wonder if George and Art got any sleep at all while at the Conference. The **Flint** boys, **Edgar and Bob,** held open house in their rooms. **Joe Dunn** of Vulcan Proofing Company arrived in town on Wednesday, but we missed him.

Because of lack of space, we are just going to tell you the names of a few other friends. **Oscar Roesen** and **I. Tornberg** of Wood Newspaper Machinery Corporation; **D. T. Stephenson** and his sales staff of Burgess Cellulose; **Carl Drange** of Walter Scott & Company; **Harry Porter,** Vice President of Harris-Seybold-Potter Company; **Walter Huber,** President of J. M. Huber Ink Company; **George Watrous** of Duplex and **Byron Davis** of Ideal Roller; **Arthur Thompson** of Geo. H. Morrill Company; **Tim Ryan** of International Printing Ink and **Jack Meadth** of Lanston Monotype Machine Company. Just off hand, we can't recall seeing an Intertype display, but we did see **Captain Mann, Herman Freund and Johnny Plummer** very much in evidence. **Harold Mohr** of Mohr Lino-Saw Company; ever-busy **Harry Gage, C. H. Griffith** and **Fred White** of Mergenthaler Linotype Company; **Rollo Lewis, Charlie Scherb** and **C. C. Cox** of Wood Flong Corporation; **Bert Lipe** of Blatchford; **George Kennel** doing the honors for Certified Dry Mat Corporation; **John J. Fields,** new president of Wm. C. Herrick Ink Company; **Phil Gleason** of Ideal Roller & Mfg. Company and **Tom Riordan** of San Antonio Roller Works.; **A. C. Arnesen** and **John B. Webendorfer** of ATF; the **McHughs,** distributors for Goodyear printing products.

SPECIAL EDITIONS

Ambridge (Pa.) Citizen

The Wednesday June 12 edition of the Ambridge (Pa.) *Daily Citizen* consisted of 62 pages in 5 sections. The issue was printed in commemoration of the 140th anniversary of Beaver County and the 35th of the city of Ambridge. A total of 252 advertisers participated. Although no color work appeared in the edition, the pages were liberally sprinkled with halftone engravings.

Blue Water Edition

Composing Room Superintendent F. E. Marengo, Stereotype Foreman Levi E. White, and Pressroom Foreman Millard E. Shirts, all of the executive personnel of the Port Huron (Mich.) *Times-Herald*, must be proud of the Sixth Annual Blue Water Edition which consisted of 94 pages in 8 sections, espousing the vacation advantages of the territory in and about Port Huron. The edition was handled by the regular composing room force over a period of six weeks. The entire edition was printed upon pink paper and several of the front pages of several sections were printed in blue ink with halftone areas. Excellent craftsmanship.

1941
Mechanical Conference

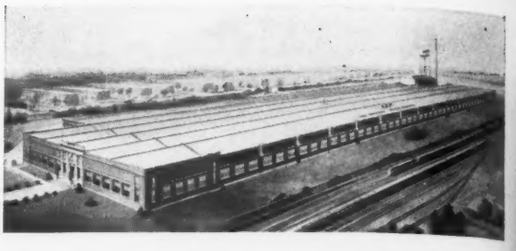
According to Manager W. E. Wines of the Mechanical Department, the 1941 A.N.P.A. Mechanical Conference will be held at Hotel Statler, Buffalo, New York, June 9, 10 and 11, 1941.

St. Joseph (Mich.) Herald-Press

Mechanical Superintendent Louis Wille and Press-Stereo Foreman G. A. Hess of the production departments of the St. Joseph (Mich.) *Herald-Press* are justifiably proud just now. The National Editorial Association which convened recently in New York awarded top honors to the *Herald-Press's* 142-page annual New Year's Edition as the outstanding edition in the Special (newsprint) Edition Division of the 1940 National Newspaper Contests sponsored by the N.E.A. In recognition of the award, the *Herald-Press* will receive a plaque donated by Meyer Both of Chicago.

Cincinnati Times-Star

Celebrating 100 years of existence, the Cincinnati *Times-Star* was published in a 318 page edition on Thursday, April 25. Each paper weighed 5 lbs. The Centennial Issue is said to be one of the five largest newspapers ever printed. Advertising was participated in by 1000 business concerns. Editorial material was contributed by over 1000 readers. Mechanical executive staff of the *Times-Star* consists of Composing Room Superintendent Robert Legleiter; Photoengraving Superintendent George Geist; Stereotype Superintendent Earl Burwell and Pressroom Superintendent Joseph Donohue. We'll bet these executives are glad the big issue doesn't come frequently



View of new No. 2 plant recently completed in Philadelphia for SKF Industries, Inc. is devoted exclusively to antifriction bearings.

Giving Voice to the Press

At the third Printing and Advertising Clinic sponsored by the General Printing Ink Corporation, several well-known printing executives discussed various phases of newspaper production under the general title *Giving Voice To the Press*. The clinic was held at General's Galleries in New York.

Those participating in the speaking program were: Mechanical Superintendent A. H. Burns, who spoke on *The Mechanics of Newspaper Printing;* Production Manager Austin Thomas of J. Walter Thompson, discussed *Newspaper Production from the Agency Angle;* Len S. Pinover, Vice President of Intaglio Service Corporation talked on *Color Gravure in Newspapers*, while Gilbert P. Farrar, Newspaper Consultant, prophesied under the topic: *The Newspaper of Tomorrow*.

Nuggets Picked Up

Mr. Burns: "The production department (of a newspaper) is constantly faced with problems of one sort or another and I doubt if any single person will ever know all the answers to them."

Mr. Thomas: "The unavoidable variation of reproduction in long high-speed publication runs is a condition that must be recognized and faced by the agency as well as the publisher. The material supplied by the agency should minimize, so far as possible, the adverse effects which may result from variation."

Mr. Pinover: "No publishing process depends more heavily on the human element than does colorgravure. To overcome the instability of this element, the industry is developing technical instruments and methods of control. Some plants have already made reasonable progress in this direction."

Mr. Farrar: "The present sheet size of newspapers will not be changed. The sizes will either be the standard size or the smaller tabloid size. Why? Very simple answer: There are millions upon millions of dollars invested in the present size of newspaper presses. Are we going to junk these presses? Not much," and from another part of his talk, "It is definitely detrimental to leave out column rules between columns of news material."

Fine New SKF Plant

The No. 2 plant shown in the illustration will materially increase the capacity of SKF Industries, Inc., Philadelphia, in the production of more than 6000 types and sizes of ball and roller bearings—one of the most modern plants in Philadelphia, located on the Pennsylvania Railroad at Bridge Street, and the third of SKF's Philadelphia factories.

The one-story, saw-tooth, daylight type building contains 226,000 square feet of floor space on a plot of 15 landscaped acres and will be devoted exclusively to the manufacture of antifriction bearings.

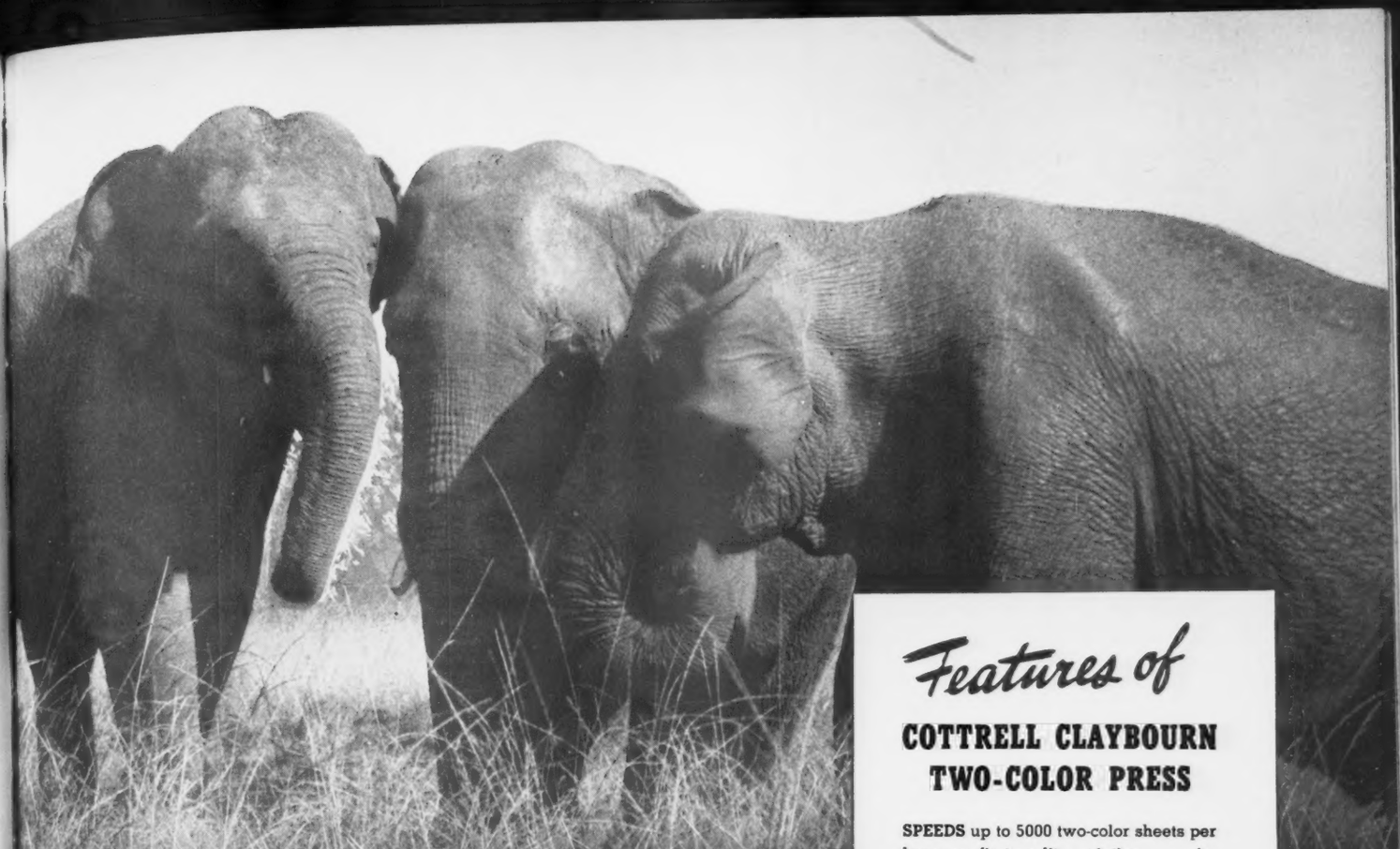
The Atlas Ball Company, a subsidiary, will continue to manufacture balls at Glenwood and American Streets.

The editor invites all mechanical and production executives to pass on mechanical helps to our readers. Have it typewritten, send a proof or just get out the old pencil and write it on white waste.

Photo Story of Inkmaking

A new pictorial story which outlines the steps in the manufacture of modern printing inks is being issued this month by the International Printing Ink Division of Interchemical Corporation. The book is called, "Back of the Printed Word." It is available to printers and others connected with the Graphic Arts. The book contains 29 bleed-page, black and white photographs. Each picture is accompanied by a brief explanatory paragraph.

Back of the Printed Word does not profess to be a manual on how ink is made, says its preface. It is designed, rather, to give the reader an impression of the fundamental program of research, the large variety of new materials, the factory control, and the extensive manufacturing operations which are back of today's printing ink.



You can hunt BIG GAME

if you have the right equipment

LARGE orders for printing are little if any harder to get than small orders . . . if you are equipped to handle them economically.

With the Cottrell Claybourn Two-Color Rotary, you are well equipped for big jobs and big profits . . . as well as for ordinary runs of printing which formerly were considered too small for a rotary press. Write for booklet.

C. B. COTTRELL & SONS CO., WESTERLY, R. I.

NEW YORK: 25 East 26th Street • CHICAGO: 400 West Madison Street

CLAYBOURN DIVISION: 3719 North Humboldt Avenue MILWAUKEE, WIS.

SMYTH-HORNE, LTD., 1-3, Baldwins Place, Gray's Inn Road, LONDON, E. C. 1

Features of

COTTRELL CLAYBOURN TWO-COLOR PRESS

SPEEDS up to 5000 two-color sheets per hour on first-quality printing . . . including four-color process work twice through.

NET PRODUCTION is ordinarily greater than the *running speed* of any other two-color press on the same kinds of work.

ECONOMICAL MAKEREADY. With the perfected curved plates which are now obtainable, makeready is practically eliminated.

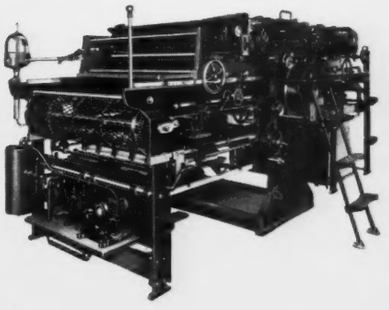
CLAYBOURN spirally grooved cylinders. Claybourn rapid register-hook system.

AUTOMATIC stream feeder. Automatic plate cylinder trip.

HAIRLINE register. Uniform impression.

REMARKABLE ink distribution. All rollers interchangeable.

INK ROLL-BACK. Quick fountain adjustments. All adjustments accessible from the floor.

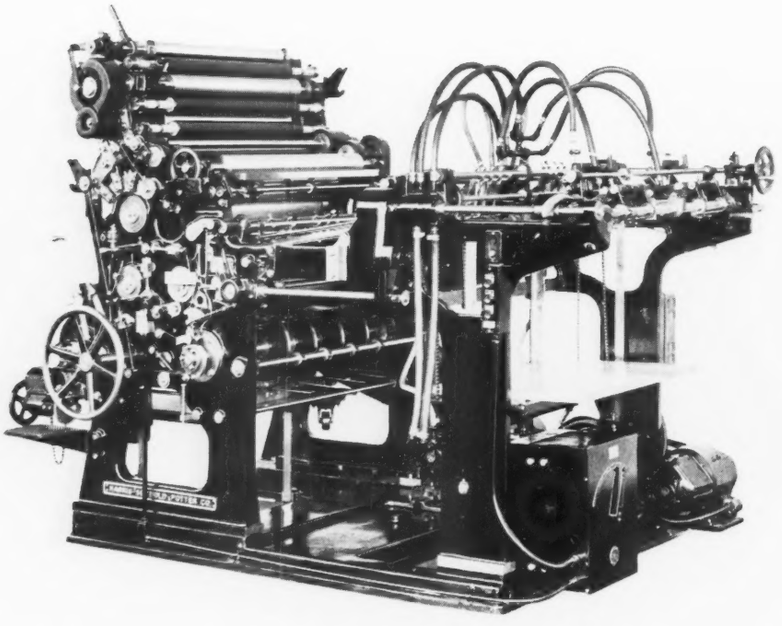


COTTRELL CLAYBOURN

TWO-COLOR ROTARY PRINTING PRESS

THE PRINTER NEEDS OFFSET

because his market is thereby completely served . . . . . .



THE PRESS OF *Modern Business*

built by the pioneer makers
of successful Offset Presses

The printing market could scarcely be served without expanding the opportunities of customers through the use of modern production methods. Offset—dramatic, colorful and highly expressive—must of necessity enter into the promotion program of any progressive buyer of printing because it IS modern, effective and when used in its proper application to the job, is also economical.

THE PRESSROOM NEEDS HARRIS

because it is the press equipment qualified to supply high quality, salable sheets that *build business* . . . . . .

● A printer can better serve his own market and reach out into additional markets when the facilities for Offset have been added to present equipment. Through Offset, the printer is able to secure many profitable jobs that would otherwise be left undone. Additional jobs, the result of Offset's ability and general acceptance, are brought into the pressroom to win complete confidence for complete service.

HARRIS
Litho-Chemicals

Through research Harris has developed and standardized new chemicals for both deep etch and surface plate making processes. Full details upon request. Write us with reference to your lithographic problems.

HARRIS OFFSET PRESSES

·HARRIS · SEYBOLD · POTTER · COMPANY·

PIONEER BUILDERS OF SUCCESSFUL OFFSET PRESSES

General Offices: 4510 East 71st St., Cleveland, Ohio • *Harris Sales Offices:* New York, 330 West 42nd St. • Chicago, 343 So. Dearborn St. • Dayton, 819 Washington St. • Atlanta, 120 Spring St., N.W. • San Francisco, 420 Market St. • Harris-Seybold-Potter (Canada) Ltd., Toronto, Montreal • *Factories:* Cleveland, Dayton

MAGNESIUM ALLOYS

(Continued from page 30)

surface of the magnesium under the solder expedites the "tinning" operation.

Service Life of Magnesium Plates

Magnesium alloy etching plates have a hardness greater than that of zinc and approximately the same as that of copper plates, but tests have shown that, when used for direct printing magnesium plates stand up better than copper plates. This is illustrated by Figures 7 to 9 inclusive which are photomicrographs at about 27 diameters of identical areas in similar zinc, copper and magnesium plates taken after making 54,000 prints under the same conditions on the same press. The better condition of the magnesium plate is obvious. As many as 90,000 prints have been made with magnesium plates without causing enough wear to impair the quality of the reproduction.

Because of the fact that magnesium plates etch without under-cutting the top, they produce excellent mats in either paper or lead and a great many impressions can be made before distortion occurs.

Conclusions

So far as shop practice is concerned, the most serious obstacle to the general acceptance of magnesium plates by photoengravers is the different and more difficult technique required when repairing damaged plates. It has been pointed out by photoengravers that the time saved in etching magnesium plates may be offset by the extra time required to clean up or repair slight defects. The development of simple and rapid methods of repairing magnesium plates would be of great aid in the commercial introduction of magnesium etching plates and present experimental work is concerned with this problem.

The tendency of magnesium to tarnish or pit under unfavorable conditions of storage has caused some concern for plates that are used and then filed away for possible future use. Although this is a problem to consider, it is felt that it can be solved without particular difficulty. Under ordinary indoor conditions, it is known that 3 years' storage does not adversely affect etched magnesium plates. Where acid fumes or excessive humidity are present, the plates can be protected by a chemical dip coating or by oiling. Corrosive attack on magnesium requires the presence of moisture so the essential point in storing magnesium etching plates is to keep them in a dry place and to make sure that they are dry before storage.

From our experience thus far, a partial list of the advantages or benefits that would result from the use of magnesium etching plates are:

1. Magnesium plates can be processed by all three commonly employed light-sensitive tops.
2. Magnesium plates are suitable for line-cuts, coarse screen or fine screen work and thus capable of replacing both copper and zinc, allowing the plant to standardize on one plate material and one processing method.
3. Magnesium plates can be processed more rapidly than either copper or zinc plates.
4. Magnesium plates allow longer runs when used for direct printing.
5. Magnesium plates will make more and better mats.
6. Magnesium plates weigh less than ½ as much as zinc plates and less than $^1/_3$ as much as copper plates which would result in greatly lowered mailing cost to firms that ship plates long distances.

Although it is felt that a little more experimental work is desirable before offering magnesium plates to the trade, the economic side of the picture has been given some consideration.

It is hoped this article will stimulate an interest among photoengravers in magnesium etching plates which appear to the layman to have many desirable characteristics. Although magnesium plates are not being marketed to the trade in general, the American Magnesium Corp. will be pleased to cooperate in tests by interested engravers under controlled conditions.

Acknowledgments — The author wishes to acknowledge the very considerable aid in this work rendered by Roy Manny of the Rolled Plate Metal Co., Charles Hoyer of Fuller & Smith & Ross and Messrs. Friedey and Pogalies of the Ad Service Engraving Co. The magnesium sheet was ground and polished by the Rolled Plate Metal Co. of Brooklyn, N. Y. The magnesium cuts to illustrate this article were prepared by the Ad Service Engraving Co. of Cleveland. The encouragement and suggestions made by Mr. Hoyer during the course of the work were most helpful.

Newspapers of Every New England State Represented at Conference

The eleventh semi-annual meeting of the New England Daily Newspaper Composing Room Executives' Association was held Sunday, May 19 at Hotel Vermont, Burlington, Vt. Approximately 52 newspaper composing room executives and manufacturer representatives were present from the New England states.

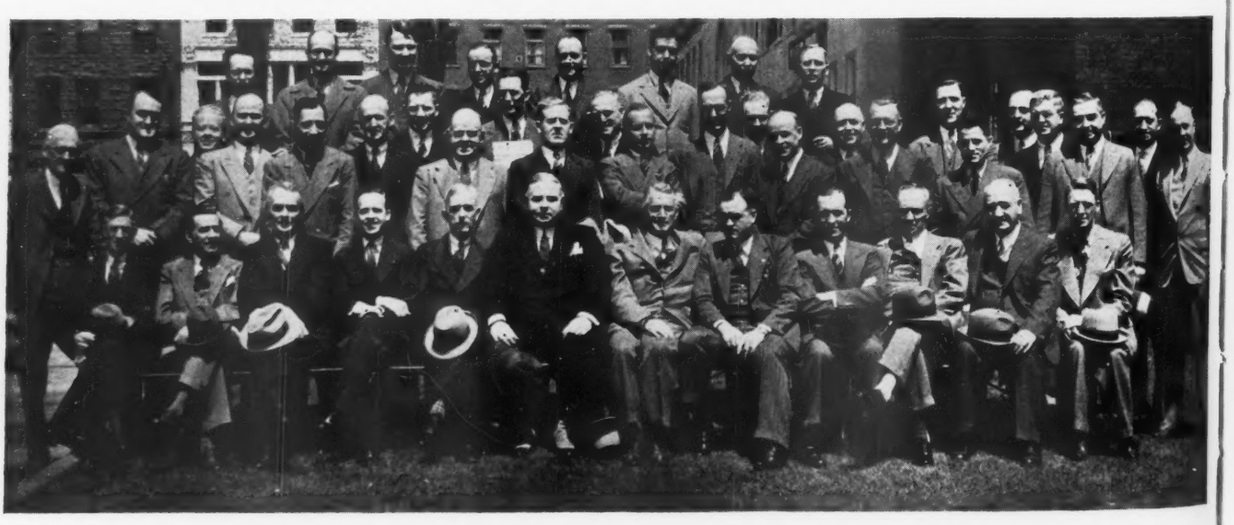
Officers for the previous year were: President John H. Laing of the Manchester (N. H.) *Union Leader;* Secretary Herbert F. Haake, Christian Science Monitor, Boston. Convention Host was Walter H. Deshaw of the Burlington (Vt.) *Free Press and Times.*

Preceding the banquet, Business Manager David W. Howe of the Burlington (Vt.) *Free Press*, gave an address of welcome. Principal speaker at the banquet was Director of Typography Douglas C. McMurtrie of the Ludlow Typograph Company, who discussed "Typography That Sells Merchandise."

The composing room group voted to join with the New England Mechanical Conference to be held at the Hotel Statler in Boston, Mass., Oct. 19, 20 and 21. Details of this meeting are to be handled entirely by the officers of the mechanical group.

The new officers for the composing room executives' group are: President F. M. Britton of the Nashua (N. H.) *Telegraph;* Vice President Daniel Stevens of the Middletown (Conn.) *Press;* Secretary Joseph J. Mahoney of the Holyoke (Mass.) *Transcript;* Treasurer Andrew P. Palmer of the Woonsocket (R. I.) *Call* and director for three ensuing years, D. O'Brien of the Hartford (Conn.) *Times.*

The city for the May 1941 meeting has not been chosen.



They were *DEFINITELY* interested ---

IN THIS REVOLUTIONARY INVENTION

Announcing
a definite step forward
. . . for all large letter press printers
The First Printed Announcement of A Revolutionary Invention Which Has Amazed the Letter Press Industry for an Entire Year

Reproduced from
PRINTING EQUIPMENT ENGINEER
June 1940

YES, large letter press printers of labels, cartons, etc., were *definitely* interested in the great possibilities of Quality Step-and-Repeat Molded Plates for substantial savings, as announced in this publication last month.

By this method of plate making, perfected more than a year ago (Pat. App. for), an unlimited number of reproductions of an original image can be printed on one sheet *from one printing plate! 10, 20, 30, 40 or more printed labels, or other subjects, are ganged on one plate*—each label guaranteed to be an exact duplicate of the original engraving.

The single printing plate, combining all the individual labels, or images, is *pre-made-ready* for exact surface uniformity and can be duplicated easily.

Better and faster line up and register are assured, cutting time is reduced 50%, paper costs are lowered, more labels, or subjects, per sheet of paper are printed, press time is substantially cut. Unlimited color combination may be employed.

For the first time in the history of letter press printing this process presents plant owners and superintendents with every advantage of lithography plus the flexibility of letter press, with definite guaranteed economies. No changes in your present equipment are necessary, for flat or curved plates.

Write for information regarding a new process for *absolutely non-stretch Curved Plates.*

LIST OF OUTSTANDING PRODUCERS WHO USE QUALITY STEP-AND-REPEAT MOLDED PLATES

- Grant Paper Box Co., Pittsburgh, Pa.
- U. S. Printing & Lithographing Co., Cincinnati and Branches
- Multi Color Type Co., Cincinnati
- Richardson Taylor Globe Corp., Cincinnati
- Gardner Richardson Co., Middletown, O.
- American Coating Mills Co., Elkhart, Ind.
- Dittler Bros., Atlanta
- U. S. Playing Card Co., Cincinnati
- National Label Co., Philadelphia, Pa.
- Kellogg Co., Battle Creek, Mich.
- National Label Co., Cincinnati, O.
- Champion Paper & Fibre Co., Hamilton, O.

ONE PLATE combines a group of individual plates formerly necessary. Each illustration is an exact duplicate of the original.

CUTTING TIME is reduced 50%, paper costs are substantially lowered; press time reduced.

MORE LABELS or other subjects can be run on a sheet and each reproduction is uniform.

COLOR WORK is more economically produced because the plates are pre-made-ready.

Write for details or send samples or descriptions of work. This major advancement will definitely save you money. *Write:*

THE QUALITY ENGRAVING & ELECTROTYPE CO.

CINCINNATI • ESTABLISHED IN 1914

Tune Yourself To The Trend—*Concentrate on process you are using (be it letterpress, offset or gravure) but keep up-to-date and compete with best equipment available*

By PETER DENNERLEIN*

**Manufacturing Director, Crowell-Collier Publishing Company, Springfield, O. Abstract of address delivered before Chicago Club of Printing House Craftsmen, May 25, 1940.*

IN a recent issue of *Printing Equipment Engineer*[1] appeared an article by Frederick Rudge, dealing with obsolescence of machinery and equipment and its relation to costs and quality of printing. Mr. Rudge speaks in self defense, admitting he could not do the quality-plus printing jobs for which he was called upon, without buying new equipment—for the reason that his customers would not pay the premium for quality printing based on the costs he had with his obsolete equipment.

If the Rudge Press finds itself in such a position it must be an obvious reason why so many of us in the printing business find ourselves up against it in competition with various processes of printing, and with the everlasting question in front of us: *Where do we go from here?*

I am convinced that this problem is not one for the manufacturers of printing equipment since in so many cases they cannot convince us that it would be to our interests to buy the equipment they now have for sale—which is ten, twenty, and in some cases, thirty years ahead of what we are actually using.

Those of you who attended the Craftsmen's Fifth Educational Graphic Arts Exposition in Grand Central Palace last October clearly remember the much advanced equipment exhibited with which the printing field can be improved greatly as a profitable business field.

If we, as printers, would make demands on the manufacturers instead of waiting for them to try to sell us what they have, we would not have the sheriff waiting for us in the morning, nor would we worry about Offset, Rotogravure, or any other process putting us out of business.

To illustrate, in 1929, I inquired of a manufacturer's representative why his company would not come out with a 2-color, 25 x 38 Press. This man said he couldn't answer that question, but referred me to his sales manager. Several weeks later the Vice president and the representative called on me and flatly said there were two specific reasons why the company could not build a 2-color press—first, the engineering cost would be approximately a million dollars, and second, they had canvassed the field and the most they could hope to sell would be about 25 such presses. One year later, however, after the depression had already started, an executive of another press manufacturing company took up the challenge and came out with a 2-color press of which hundreds have been sold.

Where are we going? We have lost our destination because we try to go in too many directions at one time. Instead of talking about the shortcomings of a competing process, be it Offset or Gravure, why don't we concentrate on the problems of the particular process we are using and compete with the best equipment available and actually make money out of the process we are using, regardless of which one it is?

There is room today for Letterpress, for Offset, for Rotogravure. Money can can be made on all three—but not with the equipment we purchased in 1905, 1915, or even 1925. Are any of you driving a 1915 automobile? If not, why do you expect to make money with a 1915 press?

Printing progress has been made during the past 30 years in the publishing field, to meet the ever increasing demand of the advertiser and reader for a higher standard of printing quality—a quality capable of creating keener desires on the part of the reader for the products advertised in the magazine's pages.

Through the increase of liesure time, all magazines reached new circulation peaks from year to year. With that increased circulation, increased demands for higher quality and more perfect reproductions of illustrations were made upon the publisher.

About 1920, the Multi-Color, or McKee, press made its debut, but it met with an unfavorable reaction on the part of the advertiser who insisted that the quality suffered because of the instantaneous printing of one color on top of another. This was true for the time being, but in less than five years most of the larger circulation magazines had adopted that type of color printing machinery.

About 1928, the perfecting color press, printing 2 colors on one side and 4 colors on the reverse, came into the field and was found to be a hindrance to quality because of the necessity of using a tympan or offset sheet on the 2-color side, which licked off the printing on that side because of the impression made when the 4 colors were printing on the reverse side. This brought about the steam drum and gas oven ideas that enabled us to use Vaporin, or heat-flash inks, made out of a very volatile solvent which dried instantly when coming in contact with heat. This process started with black printing and in a very few months spread to 2-color and finally to 4-color both sides, drying instantly at a speed of 600 ft. per min.

From time to time, publishers have tried to find a new process to supplement Letterpress. After a long process of experimentation, Offset printing was finally discarded because of the inability to make offset plates durable enough for an entire run, and because of the inability to devise an ink giving the same life and color values that it was possible to get in Letterpress.

And then came Gravure. Rotogravure has been used in commercial printing for the past 50 years, both here and abroad. But not until 1934 was it possible to increase the speed of Rotogravure printing. Through the use of volatile inks, however, it was found possible to use it in the printing of Sunday newspaper supplements. The Crowell-Collier Publishing Company felt that process had something that the publisher, advertiser, and reader had long sought—that is, a continuity of tone without distortion caused by the halftone dot that is present in Letterpress printing. In Letterpress, the halftone dot will only carry so much ink on the top of the dot. In Gravure, the ink carried in reverse dots (depressions or intagliations) can be piled on the paper to any desired depth.

During the past five years many changes have taken place and much has been done to perfect Gravure. Today it is an outstanding medium for the reproduction of the finest color photography, water color, oil, or any kind of art.

All these developments and improvements have given Gravure a place of definite and growing importance in magazine production—both as an important supplement and a substitute for Letterpress printing.

The answer to your problems (common in all cities) is a rejuvenation of the minds, as well as physical equipment, of all plants. We are still of the opinion that we can stay in business and make money with methods and equipment that are 20 to 40 years old. We in the magazine field have done just that. Presses are being installed not only in Springfield, but in Dayton and elsewhere, replacing equipment that is less than 10 years old. Where are *you* going?

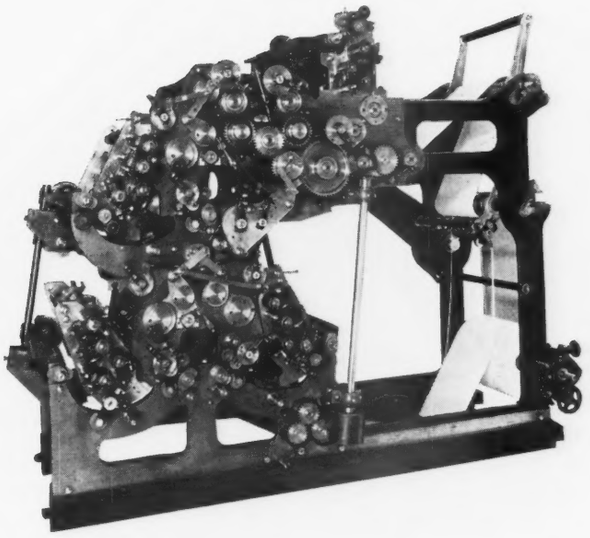
[1]December, 1939.

MEISEL

GIVES EFFICIENCY TODAY

To meet the future

you **MUST** *Modernize*



QUALITY SPEED DURABILITY MEISEL

Reg. U. S. Pat. Off.

— for further details — write

MEISEL PRESS MANUFACTURING COMPANY

944 DORCHESTER AVENUE **BOSTON, MASS.**

Some Iowa Mechanical Conference Delegates at Sioux City, May 19-20

1—Ole Gunderson, Mechanical Superintendent, Yankton (S. D.) Press and Dakotan, and A. T. Van der Linde, Sales Manager, Hammond Machinery Builders.

2—Mechanical Superintendent Guy J. Chappell of the Iowa City (Ia.) Press-Citizen, Composing Room Superintendent Tod Bleurer, Davenport (Ia.) Democrat; and Composing Room Superintendent Paul Kamler of the Clinton (Ia.) Herald. These men were unanimously re-elected President, Vice President and Secretary of the Iowa Mechanical Conference.

3—Sales Manager Joseph Goggin and General Manager Sam R. Sutphin of The Beveridge Paper Co., Indianapolis; Ernst Scherer, Herold M. Pitman Company.

4—The Triplets' Boss (Triplets at 5): E. J. Kahler, general Manager Sioux Falls (S. D.) Argus Leader, impressed upon Mechanical executives the necessity for conserving production costs.

5—The Triplets: Earl Caldwell, Stereotype Foreman; W. E. Kunitz, Composing Room Superintendent, and George Domsitz, Pressroom Foreman, Sioux Falls (S. D.) Argus Leader.

6—Ray Leach of the Omaha World-Herald and Mrs. Leach at the Omaha airport.

7—George Morrison, Milwaukee Saw Trimmer Corporation; Tony Messina, Burgess Cellulose Co.; James Jackson, Imperial Type Metal Company.

8—H. A. Meisenbach, Pressroom Foreman, and T. V. Gibbons, both of Chicago Herald-American, and Phil Gleason of Ideal Roller & Mfg. Co., Chicago.

9—D. D. Curriden, Engraving Superintendent, Minneapolis (Minn.) Star-Journal.

Will Distribute Direct

It has been announced by The Dayton Rubber Manufacturing Company that Dayco Newspaper Rollers will be handled direct from the factory. H. J.

F. P. (Pete) Peters, new Assistant Manager, Dayco Div., Dayton Rubber Mfg. Co.

Hunt, manager of the Dayco Division, has announced the appointment of F. P. Peters as assistant manager.

He graduated from the University of Louisville. In 1917 he entered the United States Army for nine months active service. On his return he became a partner in a small newspaper plant. Later he became associated with a roller manufacturer and in 1930 owned and operated his own plant.

The First Five Years

PUBLISHED as a keepsake for friends of Graphic Arts Education and members of the 19th annual conference on Printing Education in Rochester, N. Y., June 30-July 3, Fred J. Hartman, Educational Director of the National Graphic Arts Education Guild, has written what might be called a historical narrative of the Guild entitled *The First Five Years of the National Graphic Arts Education Guild*. The text is written in free-flowing, easy-reading style.

The reability of the author's story plus the excellent craftsmanship shown in producing the book will make everybody fortunate enough to receive one of the 400 copies, read it through appreciatively.

The deckle-edge booklet consists of 52 pages and cover, hand sewed, flexible cover, 6 in. by 9 in. size; designed, composed in Baskerville and printed by Printer-President C. Harold Lauck at the Journalism Laboratory Press of Washington and Lee University, Lexington, Va.

Deluxe Anniversary Booklet

Perhaps the finest booklet published in commemoration of the 500th anniversary of the invention of printing is that sponsored by the Honolulu Club of Printing House Craftsmen. The deluxe issue of *Kokua*, the club's regular publication, is 9⅛ in. by 12 in. size, contains 20 pages and cover. A number of bleed-trim color illustrations tipped to the pages give the booklet a distinctive appearance. The illustrations are historical in nature.

The text matter was prepared by three writers: *The Craftsman*, (foreword) by Carroll T. Harris; *Gutenberg and Stephen Daye*, by Editor E. W. Sternberg of the *Kokua*, and *Hawaiian Bible*, by Emil A. Bernt, Managing Editor of the *Friend*.

HUBER

VELO COLD SET INK

AND PRINTING PROCESS

(PATENTS PENDING)

NO PENETRATION OF VELO INK INTO EVEN THE MOST ABSORBENT PAPERS

So instantaneously does Velo Cold Set Ink solidify that it rests on the uppermost fibers of the paper . . . actually bridges over pin holes into which ordinary, liquid inks would be quickly sucked.

Neither penetrating nor spreading, Velo Ink produces stronger solids, leaves cleaner highlights, eliminates strike-through, and permits the printing of fine-screen halftones on rough, absorbent papers. As always, when quality paper is used, maximum pictorial contrast results.

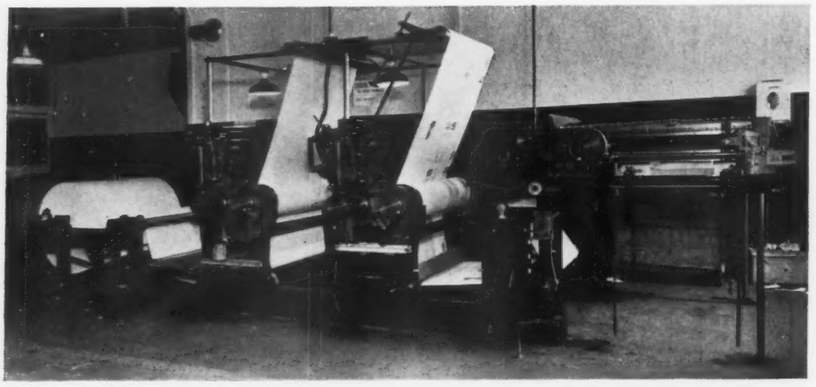
Velo Cold Set Ink at ordinary temperatures is *naturally the solid* which other inks approach as they dry. By the application of low-temperature heat (approximately 200° F.) to the press—ink fountains, inking cylinders, and plate cylinders—the solid ink is made fluid ... only to solidify again instantly upon touching the cool (room temperature) paper.

Printing speeds are limited only by the top speed at which the web can be run, and no offset webs are needed . . . washups are unnecessary except to change color . . . the lead of the web through the press is not changed, and the paper is not subject to stretching, shrinkage or strain . . . fire and health hazards are eliminated.

Additional information on Velo rotary press printing will be mailed at your request. Write to J. M. Huber, Inc., 460 West 34th St., New York. Branch offices in Chicago, St. Louis, Boston. Dealers in principal cities of the U. S. A. and foreign countries.

HUBER PRODUCTS HUBER INKS IN USE SINCE 1780

Book Production via Molded Rubber Plates



A new book-printing process uses molded rubber printing plates. With commercial production of two grade school books, the reprinting of a popular novel, and work scheduled on several unpublished titles, the newly formed North River Press, Inc., 311 West 43rd St., New York, announces the completion of several years of plate-making developmental work in collaboration with Econo Products, Inc.

The work was started early in 1934, when Econo Products furnished the rubber plates from which a mystery novel *The Emerald Murder Trap* was printed. From this starting point Econo, working in close cooperation with the founders of the North River Press, made intensive studies of all processes and methods of book-making. From data gathered in this study, and augmented by Econo's rubber plate activities in other fields, a complete program for book production was drawn up late in 1938. The program involved special materials and methods of rubber plate-making and mounting, and special rotary printing equipment adapted to the plates and production methods.

This is claimed to be the first all-Rubber Plate high-speed Rotary Magazine and Book Press designed primarily for book production with rubber plates. The press will handle a roll of paper up to 45 in. width. The two printing units are equipped with impression cylinders 34⅛ in. circumference, so that the press is capable of printing 32 pages of standard book size on each side of the web at one operation. Estimated speed is 6000 imp. per hr.

Feeding from the roll, the paper passes through a special device which keeps the web under constant tension at all times. After passing through one rubber plate printing unit, the web is carried 12 ft. before entering the second impression cylinder to allow sufficient drying of the first impression to avoid offset or smudging.

Before entering the delivery, the web is automatically trimmed on both sides by rotating knives to remove rough or discolored edges. The trim is disposed of by means of a powerful air blast. The web is then sheeted and delivered by means of a positive chain delivery. The sheets come off the delivery stack accurately cut to dimension for easy handling in the bindery.

This ATF-Webendorfer unit, says manufacturer, may mark a new trend in press manufacture. John Reed, manager of the North River Press estimates makeready time on a rubber plate press at less than a third of that required for making ready type or electros on an ordinary perfecting press. According to manufacturer's announcement, storage or rubber plates is much cheaper than either type metal or electros. According to test made by the Rubber Plate Division of American Type Founders, identical reading matter carried in the form of rubber plates can be stored in approximately one-third the space needed for equivalent electros.

The great enemy of rubber plates is abrasion. This may be caused by excessive impressional strength, by lack of proper paper control or by dust, particularly when antique finished stock is run. The use of rubber plates is estimated to effect an economy of about 25% in ink consumption, but proper inks and adequate ink distribution are vital to good rubber plate printing.

The North River Press makes its own plates with a rubber plate-making machine. A plastic, called Plastiply, has been developed as the matrix medium for molding. Using one of the latest rubber plate compounds, plates can now be cured in as little as 5 min. According to Mr. Reed, because of the accessibility of the impression cylinders on the ATF-Webendorfer rubber plate press and the speed with which rubber plates can be attached to the patent base, a duplicate plate can be made and put on the press ready to run within 10 min.

While the North River Press will specialize in book production, the ATF-Webendorfer equipment is said to be suitable for combination runs of letterheads and forms, for all-over print jobs such as fancy wrapping papers and for other similar work.

According to Econo Products, Inc., development of the press is credited largely to John B. Webendorfer with the cooperation of Ideal Roller Company and IPI Laboratories in meeting the factors affecting roller and ink requirements for a press of this type.

It is said the plates are molded direct to spring brass and are formed for attachment to a special device incorporated with the plate cylinders of the press, this method providing a high degree of pre-registration of the plates off the press, As the mounting method is practically instantaneous, complete plate changes and makeready are accomplished in about one-half the time required for normal metal-plate book printing.

F. S. Young of Pioneer Mfg. Co., Toledo, O., announces the purchase of Printers' Equipment Mfg. Co. in the same city.

GOOD FELLOWSHIP

(*Continued from Page 23*)

rooms. The proposal was carried unanimously at Tuesday's correlation meeting.

After discussing the question: *What should be the maximum number of ad men per saw-trimmer?* it developed the consensus of opinion was that many composing rooms are equipped with too few saws and as a result there is much "waiting in line" that could be eliminated if more saws were used.

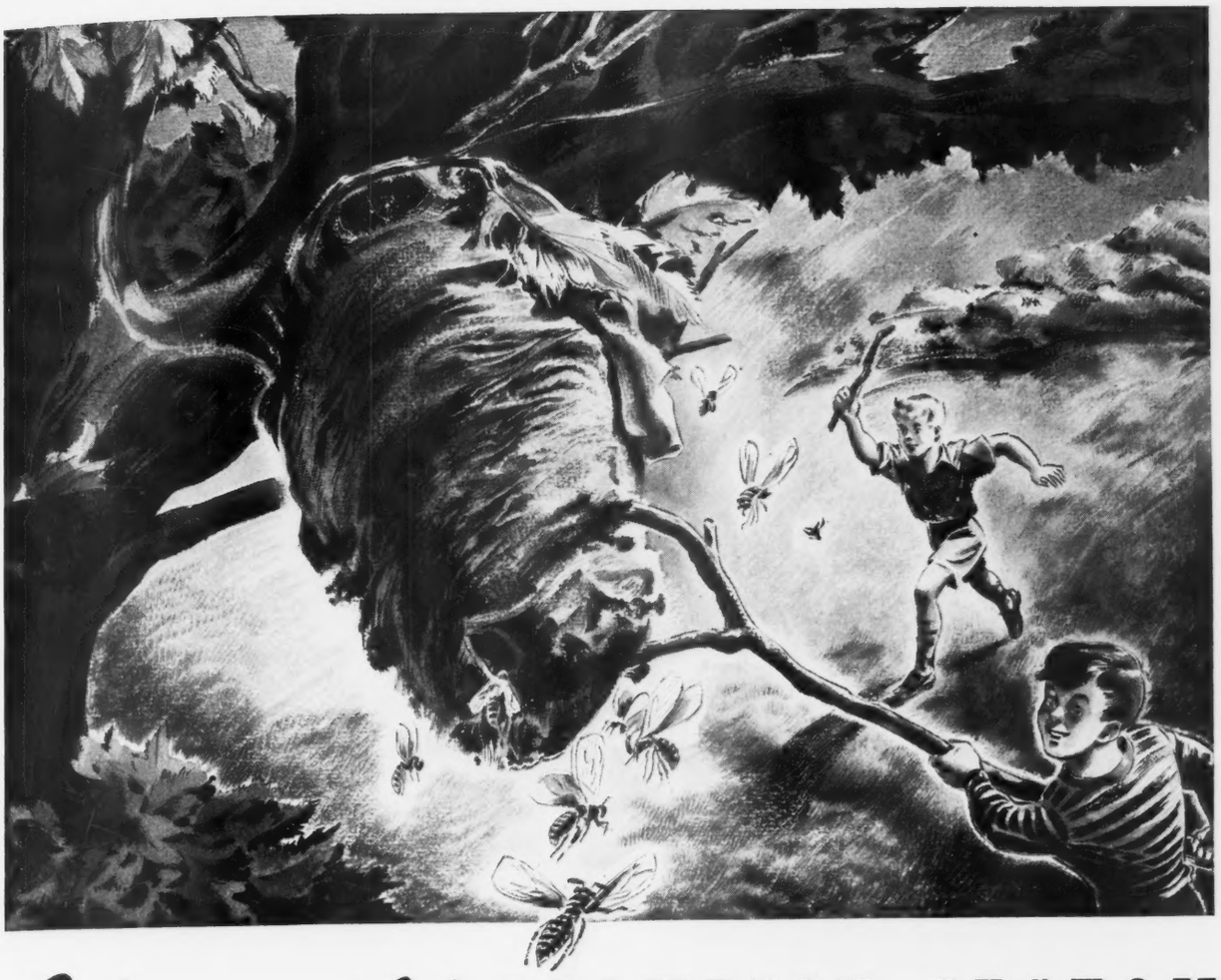
Another question which precipitated discussion was that in which it was asked whether it was more advantageous to set grocery ads complete on mixer linecasting machines, or to use other types of machines (straight-line unmixed composition), the products of which require more or less cutting-in. After considerable discussion, the chairman asked how many executives present were using mixer equipment. About 70% indicated that they were using this type of equipment.

Several composing room executives reported that less lines of grocery composition per hour could be set on mixer machines than straightaway (non-mixer) composition. These executives claimed, however, that this additional time was more than made up by savings in time of the assembly men.

Several composing room executives reported that charges made for advertisers' changes on day of publication had reduced materially the number of changes requested. One composing room executive reported his firm as collecting from $200 to $300 per month for these changes. One other executive reported that since putting in these charges the reconstruction costs had been reduced to 2.7% of their total composing room time.

At the Composing Room correlation meeting on Tuesday morning, Earl Anderson, Composing Room Superintendent of the Rockford (Ill.) *Register-Republic* and *Star*, felt that if the publisher doesn't want to charge for reconstruc-

(*Continued on Page 44*)



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tion costs, the composing room executive shouldn't feel these costs are his concern.

Unseen Production

Ray Leach, Omaha (Neb.) *World-Herald* composing room superintendent, took issue and stated that the publisher often thinks there are only two operations in the composing room—machine composition 25% and hand composition 15%; these total only 40% of the payroll. Mr. Leach asserted that these two operations are the least part of the payroll, and asked: "What constitutes the other 60%?" In his opinion, the speaker stated lack of efficiency or unseen production accounts for a large part of the 60%. Where a publisher is cost conscious you can't get anywhere until you show him that reconstruction costs account for at least 10% of the remaining 60% by breaking down the costs into column costs and expressing these costs in dollars and cents. He maintained that charging the advertiser for reconstruction costs is a legitimate charge.

Copy Control

There was unanimous opinion that there is a serious need for better copy control. In several plants, all copy is routed through a man in the editorial room who has charge of copy control. It is his job to estimate the copy as it clears his desk. If there appears to be an overload he reports back to the department causing the overload and arrangements are made to reduce the flow of copy to the extent that the composing room can close the edition on time.

Mechanical Superintendent William Govier of the Buffalo (N. Y.) *Courier-Express*, stated that in some of the New York offices photostat machines are being used to scale down advertising cuts. This is a quick method of providing the composing room with accurate cut sizes.

While visiting a newspaper composing room, Mechanical Superintendent Eugene D. Jagareski of the Albany (N.Y.) *Knickerbocker News*, said he had observed the ad foreman marking off trivial advertisers' changes on ad proofs, thus eliminating unnecessary work in the ad alley. He has put this into effect to some extent in his own plant with considerable success.

Photo-engraving Clinic

The Photo-engraving meeting was held in the Knickerbocker Hotel's Red Room on Monday afternoon. Howard J. Lamade of the Williamsport (Pa.) *Grit*, presided as chairman. He was assisted by D. P. Miller of the Allentown (Pa.) *Call-Chronicle*, and Photo-engraving Superintendent Maurice A. Hagan of the Philadelphia *Inquirer*. Report of this meeting was made at the main conference session Tuesday afternoon.

The photo-engraving meeting had two speakers during the course of its program. The first of these was Jack Kelt, Mallinckrodt Chemical Works representative who discussed *Some Suggestions on Negative Making and Etching*, in an interesting manner. By means of blackboard sketches he illustrated dot formation on film.

Alfred Bourges of Transparent Film Corporation, New York, discussed a new Trans-Opaque sheet which is used particularly for speeding up the production of magazine and comic color work. Upon inquiry from someone in the audience he stated manipulation of the sheets would require the services of photo-engravers inasmuch as it was a part of the photo-engraving process.

During the discussion on practical deadline for engraving copy for r. o. p. color, experience shows that while one color and black had been produced in from 12 to 14 hours ready for the press, yet a minimum of 3 days is required without making a charge to the advertiser. Normal recommended deadlines are: 2 colors, 6 days; 3 colors, 8 days; and 4 colors, 10 days.

It was stated in the photo-engraving report that it is not always necessary to either bump up or underlay engravings. Manila underlays, 0.007 in. thick, were recommended for use by a small shop. The highlights are relieved by cutting out the manila sheets which are cemented to the backs of the cuts. D. D. Curriden of the Minneapolis *Star-Journal*, recommended a 0.007 in. manila underlay mounted on soft

(*Continued on Page 52*)

PRINTING PATENTS REPORT

Covering Patents Issued May 21-June 18, inclusive

This data is compiled exclusively for *Printing Equipment Engineer* by Invention, Inc., is verified in the United States Patent Office, and is comprehensive of all patents in the field of each heading continuous from the last published issue of this magazine.

For copies of patents listed here, specify the patent numbers and send 10c each (stamps not accepted) to the Commissioner of Patents, Washington, D. C.

Bookbinding:

2,202,518. LOOSELEAF BINDERY ELEMENT of plastic material. Shaped similarly to a comb rolled up along its longitudinal axis with the teeth overlapping the back of the comb, the device includes novel corrugations or serrations on the teeth to maintain them in proper position. Invented by Emil N. Farkas, Chicago, Ill. Assigned ½ to Frank F. Farkas, Chicago, Ill. Application December 10, 1938. 5 claims.

Composing Room Equipment:

2,201,132. TYPOGRAPHICAL SLUG CASTING MACHINE comprising a mould carried by an intermittently actuated mould disc and means controlled from a periodically actuated part of the machine for positively locating and locking the disc directly in operative positions. Invented by Christian Augustus Albrecht, Berlin, and Hermann Brandenburg, Berlin-Tempelhof, Germany. Assigned to Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn, N. Y. Application October 22, 1938, in Germany, March 7, 1938. 10 claims.

2,201,140. TYPOGRAPHICAL COMPOSING AND CASTING MACHINE comprising a line justifying spacer having two separate sections, one adapted to be circulated through the machine and the other unadapted for such circulation, but adapted to be stored at the justifying station for cooperation with the first section. Invented by George P. Kingsbury, Hollis, N. Y. Assigned to Mergenthaler Linotype Co., 29 Ryerson St., Brooklyn, N. Y. Application April 1, 1939. 20 claims.

2,201,336. MOLD DISK for typographical casting machines, and a mold disk guide which is adjustable relative to the mold disk to prevent axial movement of the mold disk relative to the guide, assuring proper alignment of the back knife with the mold, and resulting in uniformity in the height of the slug trimmed by the knife. Invented by Rudolf F. A. Denker, Denison, Iowa. Unassigned. Applications December 19, 1938. 1 claim.

2,201,633. TYPOGRAPHICAL SLUG CASTING MACHINE with improved means for moving the line clamping jaw inwardly to clamp a composed line of less than full length, means for limiting this inward movement when producing an indented slug, and a stop member preventing separation of the jaws before and during casting of the slug. Invented by Richard Henry Scott, Enfield, and William Fairall Gorse and Arthur Staniland Hayward, Altrincham, England. Assigned to Linotype and Machinery Ltd., London, Eng. Application April 19, 1939, in Great Britain, April 21, 1938. 6 claims.

2,202,434. COMPOSING ROOM SAW AND IMPROVED FACE-UP MITERING DEVICE therefor enabling the operator to cut right hand and left hand miters at the same time. Invented by Frederick W. Seybold, Westfield, N. J. Assigned to American Type Founders Inc., Elizabeth, N. J. Application May 21, 1936, divided and this application March 12, 1937. 19 claims.

2,202,654. MACHINE FOR CLEANING SPACEBANDS employed on linotype machines which automatically adapts itself for cleaning spacebands of different thicknesses. Invented by Otto C. Haderer and Walter Klein, Milwaukee, Wis. Assigned to The Haderer Co., a corporation of Wis. Application January 27, 1937. 1 claim.

2,202,942. TYPE LINE TRIMMING DEVICE for matrix composing and type line casting machines, characterized by the use of circular, rotary shearing knives. Invented by Otto Bieber, Berlin-Lichterfeld. Ger. Assigned to Typograph G.m.b.H., Berlin, Ger. Application March 27, 1939, in Germany August 3, 1938. 9 claims.

2,204,314. LINER FOR MOLDS FOR LINOTYPE MACHINES consisting of a G-shaped frame of steel, and a filler of Linotype metal of the same contour as the frame and having rib for engaging one of the spaced grooves of the mold. The new liner is claimed to adhere more easily to the mold, and may be adjusted as desired without the operator getting out of his chair. Invented by John Joseph Koblinski, Des Plaines, Ill. Unassigned. Application October 23, 1939. 1 claim.

2,204,498. APPARATUS FOR CASTING SLOTTED-EARED INGOTS suitable for use with automatic ingot feeders such as Margach feeders. The invention provides a casting mold which may be stocked without injury, as well as having features facilitating casting. Invented by Albert H. Jung, Flushing, N. Y. Assigned to United American Metals Corp., 202 Diamond St., Brooklyn, N. Y. Application July 21, 1938. 3 claims.

D. 120,792. ORNAMENTAL DESIGN FOR A PRINTER'S SAW. Invented by Glenn W. Tammen, Chicago, Ill. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application December 28, 1939.

Feeding, Folding, Delivery:

2,201,539. SHEET FEEDING MECHANISM for feeding sheets to printing presses in lapped relation to the grippers of other sheet taking devices with means for preventing sliding movement of the sheets and so maintaining a definite amount of lap between each sheet of the stream. Invented by Edward R. Kast, Pearl River, N. Y. Assigned to Dexter Folder Co., Pearl River N. Y. Application August 11, 1938. 4 claims.

2,201,604. SHEET FEEDER of the type employed to move sheets in a continuous, overlapped stream. Device comprising a drum positioned over a pile of sheets lifting suckers for lifting the sheets into engagement with the lower surface of the drum, and an endless band arrangement coacting with the rotating drum to carry the sheets to a feeding table or conveyor at the top of the drum. Invented by Headley Townsend Backhouse, London, Eng. Unassigned. Application June 7, 1938, in Great Britain, August 26, 1937. 9 claims.

2,201,605. SHEET CONVEYER so constructed as to be capable of feeding sheets from a pile of unusual height to a machine at a low level. The abrupt change of level is effected with relatively small amount of bending. Invented by Headley Townsend Backhouse, London, Eng. Unassigned. Application January 8, 1940, in Great Britain, January 3, 1939. 5 claims.

2,201,726. OVERFEED SYSTEM for rotary printing presses with novel means preventing light, tacky, or static-laden paper from buckling or climbing the overfeed cam and so getting out of register. Invented by Charles Grundhoefer, Chicago, Ill. Unassigned. Application February 1, 1939. 9 claims.

(Continued on Next Page)

YOU certainly have a winning combination when to the three best engraving plates in the pack, (Zomo Electric Zinc, A-Z Alloy, and Malloy Metal, each for its specific purpose) you draw BACKOTE.

You can order Zomo Electric Zinc, A-Z Alloy, and Malloy Metal, plain or BACKOTED, from leading metal suppliers in the United States, Canada and England.

ZOMO ELECTRIC ZINC

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2,203,014. WEB CONTROLLING MECHANISM for maintaining constant predetermined web tension in a printing machine. The invention is of the type wherein the variable speed drive for the web is automatically regulated in response to changes in position of a floating roller running in a loop in the web. Invented by Raymond A. Freeman. Mount Vernon, N. Y. Assigned to R. Hoe & Co., Inc., East River & 138th St., New York, N. Y. Application February 15, 1935. 9 claims.

2,203,181. WEB HANDLING APPARATUS for correcting lateral misalignment of the web as it is moved through a printing machine. Operated or controlled by the edge of the web, the device also employs a photoelectric control, and is said to be independent of weight or opacity of the web. Invented by Adolph Potdevin, Garden City, and Robert L. Richmond, Yonkers, N. Y. Assigned to Potdevin Machine Co., 1227 38th St., Brooklyn, N. Y. Application July 1, 1938. 12 claims.

2,203,261. PICKUP FOR SHEET FEEDERS claimed to operate positively without the use of combing wheels or similar buckling devices. Useful with both "pile feeders" and "bank feeders," the invention is particularly concerned with suction cup arrangement and tilting means therefor. Invented by Henning Hallstream, Braintree, Mass. Assigned to Dexter Folder Co., Pearl River, N. Y. Application May 5, 1938. 22 claims.

WOTTA SAW!

Ask ATF's Salesman for a demonstration TODAY! . . . or write nearest ATF Office.

American Type Founders

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Branches in Principal Cities

2,303,531. BANK FEED FOR CONTINUOUS SHEET FEEDING MACHINES, designed to maintain a predetermined thickness of paper at a desired distance behind the front edge of the feathered bank. Invention provides a novel pivoted finger to caliper the thickness of paper between the end of the finger and the feed board this caliper acting to control pneumatic pressure operating clutch mechanism for driving the feeding drum. Invented by Howard K. King, Philadelphia, Pa. Assigned to Chambers Brothers Co., 5250 Media St., Philadelphia, Pa. Application October 20, 1939. 5 claims.

2,203,607. WEB SPLICING DEVICE for newspaper presses, including a novel movable frame carrying web pressing and severing devices, and new means for moving this frame from inoperative to splicing position. Invented by Henry A. Wise Wood, New York, N. Y. Assigned to The Wood Newspaper Machinery Corp., New York, N. Y. Application March 11, 1936, renewed September 20, 1939. 15 claims.

2,203,823. SHEET FEEDER FOR PRINTING PRESSES of the type employing a blast of air to fluff the top sheet of the pile, and suction means for carrying the sheets to a conveyor. Invented by Joseph F. Jirousek, Cleveland, Ohio. Assigned to The Chandler & Price Co., 6000 Carnegie Ave., Cleveland, Ohio. Application September 21, 1938. 3 claims.

2,204,985. AUTOMATIC SHEET FEEDING APPARATUS for preventing machines including as novel elements a secondary set of fans rising chains, operable either with the primary chain or independently. Invented by Thomas Shirley Fowerаker, Bristol, Eng. Assigned to E. A. & A. Robinsin, Ltd., Bristol, Eng. Application October 16, 1939, in Great Britain, October 17, 1938. 3 claims.

2,205,127. SHEET FOLDER including a pair of folding rolls grooved to accommodate a suction member and located above a sheet pile, the suction member being moved between the folding rolls in a rectilinear motion to seize a sheet in the fold line. Invented by Georg Spiess, Leipzig, Germany. Unassigned. Application November 28, 1938, in Germany, November 29, 1937. 8 claims.

2,205,255. MECHANISM FOR MAKING REGISTER MARKS on a web in color printing processes, comprising a spark gap, the electrodes of which are on opposite sides of the web, an electrical circuit for energizing the spark gap to produce a hole in the web, and a photo-electric cell system for energizing the circuit only in response to predetermined conditions of the printing machine. Invented by Finn H. Gulliksen, Pittsburgh, Pa. Assigned to Westinghouse Electric & Manufacturing Co., East Pittsburgh, Pa. Application September 3, 1938. 5 claims.

Miscellaneous:

2,198,669. PIGMENTED LACQUER EMULSION, particularly useful as an intaglio printing ink, and method of preparing. The preparation includes the steps of forming a water-in-lacquer emulsion by mixing a pigment and water in an unpigmented water-immiscible lacquer; then mixing this emulsion with additional water to reverse the phase, producing a lacquer-in-water emulsion containing pigment in the lacquer phase. Invented by Henry Jenett, Harrington Park, and Samuel Meeker, Ridgewood, N. Y. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application November 6, 1937. 5 claims.

2,198,732. PAPER CUTTING MACHINE wherein the push-mechanism for feeding the paper is combined with a novel device for controlling the dimensions of the sections. Invented by Emile Langeenhagen, Roubaix, France. Unassigned. Application May 13, 1939. 5 claims.

2,199,743. SAFETY DEVICE OR GUARD FOR PAPER CUTTERS having a reciprocating work cutting or clamping element for protection of the machine operator. Device is rapidly extensible to automatically project itself into position prior to cutting or clamping of the work pile. Invented by Walter C. Eickman, Dayton, Ohio. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio. Application December 21, 1938. 13 claims.

2,200,069. SPIRIT PRINTING INKS employing insoluble pigments, such as inorganic colors, organic lakes or toners, or colors of the phthalocyanine series, these coloring matters being so thoroughly dispersed as to be partically indistinguishable from the solution. According to the invention, the spirit insoluble pigments are specially treated to convert them into highly dispersible form, the treatment consisting of plastic milling of the pigments in a colloidal alkyl cellulose. Invented by Herbert August Lubs and Crayton K. Black, Wilmington, Del. Assigned to E. I. du Pont de Nemours & Co., Wilmington, Del. Application January 21, 1937. 14 claims.

2,201,273. METHOD OF DISPERSING PIGMENTS IN VEHICLES, during the manufacture of printing inks, paints, etc., wherein the rate of dispersion is decreased and a greater degree of dispersion is obtained by carrying out the dispersion in the presence of minor proportions of oxygenated liquid rubber. Invented by Frank K. Schoenfeld, Silver Lake, Ohio. Assigned to The B. F. Goodrich Co., New York, N. Y. Application February 10, 1938. 4 claims.

2,201,481. PERFORATING APPARATUS FOR PERFORATING PAPER STOCK, ETC., comprising a paper or stock elevator; a pair of steel feed rollers; a multiple of perforator-pin discs and pin bars; and equal multiple of rubber discs and roller, a pair of steel ironing or mangle rollers and a stock delivery. Invented by Kenneth J. Dollahite, Fort Worth, Texas. Unassigned. Application January 12, 1938. 11 claims.

2,202,198. PERIODIC ACTUATING MECHANISM FOR PERFORATING DEVICES for printing and other installations. According to the invention, rather than operate the perforating tool and control which by one stroke of the actuating mechanism, the perforating tool is actuated when the mechanism is moved in one direction, and the control wheel when the actuating mechanism is moved in the opposite direction. Invented by Carl Funcke, Osterronfeld, near Kiel, Ger., Assigned ½ to Max Muller, Ottweiler-Saar, Ger. Application October 3, 1938, in Germany, August 6, 1937. 8 claims.

2,202,529. MULTICOLOR PRINTING PROCESS claimed to employ fewer plates and to obtain the primary and secondary colors and substantially all shades in a more exacting and natural form. The process consists of imprinting with a predetermined distribution of a vehicle containing a color pigment subject to change in color in the presence of certain chemicals, and thereafter applying a predetermined amount of the chemicals to change the color. Invented by Albert L. Lengel, Berkeley, Calif. Unassigned. Application October 11, 1937. 15 claims.

2,203,087. APPARATUS FOR DRYING INK or printed surfaces wherein the jets of the drying burner are at a slight angle, cross-wise to the advancing web, to eliminate any tendencies toward uneven heating of the printed surface. Invented by Hartwig M. Hanson, Baltimore, Md. Assigned to The C. M. Kemp Mfg. Co., 405 E. Oliver St., Baltimore, Md. Application May 23, 1939. 9 claims.

2,203,547. POWER ACTUATED GAUGE FOR PAPER CUTTERS, with means facilitating manual final adjustment. According to the invention final adjustment may be made by hand without disingaging the power drive, though the invention does include new arrangements capable of quick and easy alternation between power and manual operation. Invented by William M. Reichart, Cleveland, Ohio. Assigned to The Chandler and Price Co., Cleveland, Ohio. Application August 18, 1939. 10 claims.

2,203,567. MACHINE FOR POLISHING ROLLERS, such as used in printing machines, in which the two operations of polishing and buffing can be readily performed in the machine without altering the setting of the roller being operated upon. Invented by Isaac Harold Gilbertson, Middleton, Eng. Unassigned. Application May 9, 1938, in Great Britain, May 18, 1937. 1 claim.

2,203,605. DRIER FOR SHEETS OF PAPER comprising an endless horizontal band for conveying sheets to a rotating drier drum, the drum consisting of a number of radially disposed endless band conveyors arranged like the spokes of a wheel about the axis of the drum, these bands coacting to receive sheets from the horizontal conveyor and carry them through the drier. Invented by Robert J. Thompson, Harrisburg, Pa. Unassigned. Application May 31, 1938. 12 claims.

2,204,227. LIGHT PAPER CUTTER for cutting designs and shapes in cardboard, used in producing posters, show cards, window displays, stereotype casting forms, etc. The device includes an electric motor drive for reciprocating a cutting needle, and a novel glass needle shield. Invented by Clarence H. Richardson, Peoria, Ill. Unassigned. Application January 26, 1939. 2 claims.

2,204,550. NORMALLY SOLID PRINTING INKS and like compositions to be applied in molten form. Principle ingredients are (1) a mixture of water-insoluble soaps such as magnesium stearate and lead stearate; (2) a solid resin soluble in the soaps. Compositions are colored with oil soluble dyes or resin colors. Invented by John D. Murray, Chicago, Ill. Assigned to Murray Liquafilm Corp., Chicago, Ill. Application July 16, 1937. 8 claims.

2,204,801. METHOD OF PRINTING with inks which are non-drying at room temperatures, but which may be dried by evaporation at elevated temperatures, including the novel step of aiding solvent removal of the ink by subjecting the printed surface to a sheet of air directed tangentially to a roller over which the web is being passed. Invented by Albert E. Gessler, New York, N. Y. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application June 30, 1937. 6 claims.

2,204,802. METHOD OF CONTROLLING WEB TEMPERATURES in printing with inks containing volatile solvents, including the novel improvement of flowing air onto the printed sheet before it passes under the burner, the flow of air forming a thin film which insulates and protects the web from the burners. Invented by Albert E. Gessler, New York, N. Y. Assigned to Interchemical Corp., 75 Varick St., New York, N. Y. Application June 30, 1937. 8 claims.

2,204,934. FLEXIBLE TENSION RIDING ROLLER for paper slitting and rewinding machines. Claimed to eliminate weaving and running together of the paper,

(Continued on Page 48)

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D. C

"Greetings"

"INTERNATIONAL ASSOCIATION OF PRINTING HOUSE CRAFTSMEN"

on the occasion of your Twenty-First Annual Convention to be celebrated this year in San Francisco. Let us take this opportunity of expressing our thanks for the cooperation rendered us during our FIFTY YEARS of effort in the manufacture of "INKS FOR ALL PRINTING PURPOSES"

Sinclair and Valentine Company

Main Office and Factory: 611 West 129th St., New York City

PHILADELPHIA	NASHVILLE	SEATTLE	CHICAGO	NEW HAVEN
BALTIMORE	BIRMINGHAM	HAVANA	DALLAS	JACKSONVILLE
DAYTON	CLEVELAND	BOSTON	KANSAS CITY	SAN FRANCISCO
NEW ORLEANS	LOS ANGELES	ALBANY	CHARLOTTE	MANILA

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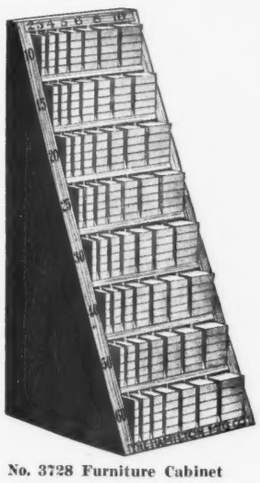
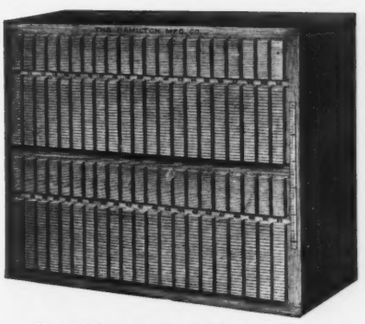


No. 3728 Furniture Cabinet

Hamilton labor-saving Furniture and Reglet Cabinets provide handy storage for lock-up materials. By concentrating furniture and reglet in separate cabinets more storage space is available under the imposing tables for work in progress.

The No. 3728 Furniture Cabinet includes a No. 3728-A Furniture Font. It contains 280 pieces of various widths and lengths of furniture. Notice that the cabinet and furniture are clearly marked for easy identification.



No. 3729-C Reglet Cabinet (Includes No. 3729-D Reglet Font)

The No. 3729-C Reglet Cabinet includes a No. 3729-D font of birch reglet consisting of 25 pieces each of 6 to 12 point reglet cut in pica lengths from 10 to 51 picas inclusive.

All Hamilton Furniture and Reglet Fonts are made of thoroughly kiln-dried birch wood . . . cut to point standard . . . oiled to prevent warping.

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particularly when the machine is operating on glazed or waxed paper, the invention provides improved end and stub shaft structures for such rollers. Invented by Conrad F. Johnsen, Omaha, Nebr. Unassigned. Application February 6, 1939. 1 claim.

Plate Making:

D. 120,581. ORNAMENTAL DESIGN FOR A PLATE WHIRLER. Invented by Glenn W. Tammen, Chicago, Ill. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application July 20, 1939.

D. 120,582. ORNAMENTAL DESIGN FOR A PLATE-MAKER'S SINK. Invented by Glenn W. Tammen, Chicago, Ill. Assigned to American Type Founders, Inc., Elizabeth, N. J. Application February 28, 1940.

2,199,614. PREPARATION OF TYPE FOR SUPERIMPOSED PRINTING. The invention is described in relation to the printing of comics, etc., in several colors where stereotypes are prepared for each color, and the printed matter is synthesized by superimposed printings from each of the several types. The invention provides an improved make up table and method for speedily and accurately producing the coordinated and necessary stenotype matrices. Invented by George W. Bungay, New York, N. Y. Assigned to Electrographic Corp., 216 E. 45th St., New York, N. Y. Application December 30, 1936. 8 claims.

2,199,865. METHOD OF PRODUCING LITHOGRAPHIC PLATES involving the use of new coating materials. Generally, the method includes the steps of coating the plate with a suitably sensitized colloidal material comprising halogenated polyvinyl alcohol, or certain analogous compounds; sensitizing the coating material to the action of light; printing the image by means of light, and rendering the image portions of the plate ink-receptive. Invented by William H. Wood, Bedford, Ohio. Assigned to Harris-Seybold-Potter Co., 4510 E. 71st St., Cleveland, Ohio. Application June 18, 1937. 23 claims.

2,200,286. PROCESS OF UNINEGATIVE MULTICOLOR PLANOGRAPHY wherein only one photographic negative is used to obtain several planographic or photolitho plates of progressive color value for the reproduction of the original copy in multicolor. Invented by Gustave R. Lukesh, Pasadena, Calif., and John G. Goedike, San Antonio, Tex. Unassigned. Application April 13, 1939. 7 claims.

2,200,363. METHOD OF MAKING PRINTING PLATES which comprises mingling rubber and a metal powder, placing a thin layer of such mixture over a sheet of rubber causing the mixture to adhere to the sheet, forming on the surface of the plate an image adopted to receive ink and producing an amalgam on all portions of the plate not covered by the image. Invented by Joseph D. Kreis, Cleveland, Ohio. Assigned to Bonnar-Vawter Fanform Co., Inc., 1700 E. 30th St., Cleveland, Ohio. Application July 3, 1937. 2 claims.

2,200,536. METHOD AND APPARATUS FOR MAKING ELECTROTYPES whereby the intaglio portions of the printing face of the backed shell are filled with plaster of Paris so that the filled portions are flush with the surfaces of the printing face, positioning the shell on a milling machine bed with the filled face contacting the bed, and milling away sufficient backing metal to produce the desired thickness electrotype. Invented by George W. Bungay, New York. Unassigned. Application May 21, 1937. 4 claims.

2,200,628. PLATE SHAVING MACHINE particularly for very thin plates, employing a combination of roughing and finishing cutters claims to increase the speed of operation and produce a smoother, leveler surface. Invented by William J. Lofstedt, Portland, Oregon. Unassigned. Application October 4, 1938. 7 claims.

2,201,346. PRODUCTION OF INTAGLIO PRINTING SURFACES in which deep shadows are produced having an intaglio reproduction of a combination of halftone dots and a fine mesh screen, the intersecting lines of the screen forming a grid surface enclosing a multiplicity of intaglio recesses interspersed between the ordinary halftone dot recesses. Invented by Arthur W. Raby, Toronto, Ont., and George R. Harvey, Cooksville, Ont., Can. Assigned to The Toronto Star, Toronto, Ont., Can. Application June 9, 1938. 8 claims.

2,203,094. CONTROL SYSTEM FOR PHOTO-COMPOSING MACHINES with novel means adapting the control to be ineffective when the printing plate is held in printing relation relative to the sensitized surface. Invented by Alexander T. Koppe, Hasbrouck Heights, N. J. Assigned to General Printing Ink Corp., 100 Sixth Ave., New York, N. Y. Application August 22, 1936. 14 claims.

2,203,652. METHOD OF MAKING A COLOR CORRECTED PHOTOGRAPHIC IMAGE, so that correct register is automatically insured. Process utilizes a colored transparency, and comprises binding an unexposed print-out layer in contact with the transparency, and exposing the print-out layer through the transparency to form a masking image in register with the transparency. Invented by George Ehrenfried, Rochester, N. Y. Assigned to Eastman Kodak Co., 343 State St., Rochester, N. Y. Application January 6, 1939. 5 claims.

2,203,653. INTEGRAL MASK FOR SECURING COLOR CORRECTION in printing high-contrast color transparencies. Particularly for correcting deficiencies of positive inks, or pigments used in the final printing in photomechanical processes, the mask represents the black and white values of the original subject, and is integral with the original film or plate. Invented by Ralph M. Evans, Rochester, N. Y. Assigned to Eastman Kodak Co., 343 State St., Rochester, N. Y. Application April 27, 1937. 3 claims.

2,203,656. NOVEL PHOTOGRAPHIC MATERIAL for use in the graphic arts to produce photomechanical printing plates. The invention is particularly concerned with color correction to the photographic reproduction of color, involving subtraction of transmissions of photographic images. Invented by David L. MacAdam, and Cyril J. Staud, Rochester, N. Y. Assigned to Eastman Kodak Co., 343 State St., Rochester, N. Y. Application April 10, 1937, divided and this application August 11 1939. 4 claims.

2,203,849. METHOD OF TREATING PRINTING PLATES by application of a layer of chromium with an unpolished absorbent matt surface activated to attract a greasy ink, the non-printing surfaces being passivated by application of a liquid to cause the areas to be grease repellant. Invented by Arthur Ronald Trist, Chipstead, Eng. Unassigned. Application May 13, 1937, in Great Britain May 29, 1936. 8 claims.

2,204,080. METHOD OF PRODUCING SCREENED PHOTOGRAPHIC IMAGES, including formulas and steps for determining and controlling the exposure so that the aperture pattern will be of proper size and shape, the screened images thereby consistantly approximating fidelity possible by continuous tone renderings. Invented by August C. Hansch and Henry E. Hansch, Whippany, N. Y. Unassigned. Application June 24, 1938. 8 claims.

2,204,905. METHOD OF MAKING MATRICES for use in casting or shaping sheets of rubber. Made from sheets of resin such as Bakelite, the matrices are produced by placing the sheets in a press or type bars, as in conventional methods, the novel feature of the invention being that the bearers of the chase have upper matrix supporting surfaces in a plane above the upper surface of the type bars, and therefore function both to receive most of the pressure exerted by the press and to straighten the matrix before it reaches the type. Invented by Herman T. Nekton, West Hempstead, Long Island, N. Y. Assigned to Samuel H. Moss, New York, N. Y. Application June 15, 1939. 5 claims.

2,204,523. PLATE REGISTERING MACHINE for making permanent registering marks on semi-cylindrical

(*Continued on Page 50*)

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A high standard quality knife insures your getting full value out of your trimmer. Our quality knives are not higher priced. Write us, sending sketch or pattern showing dimensions, together with name of Cutter. We will gladly quote you prices, delivery, etc., and also help you select quality, type and temper of knife best suited to your operating requirements.

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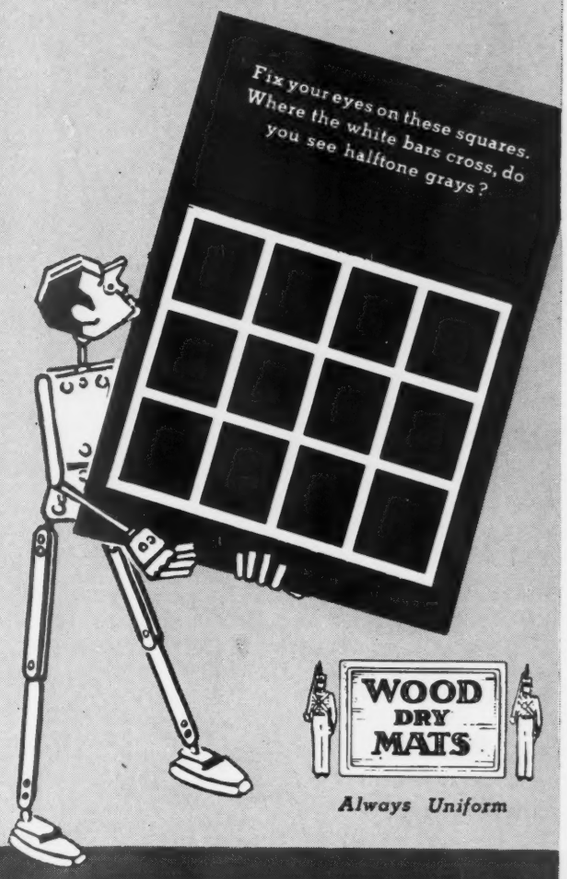

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plates on which a preliminary registration mark has been made. The new machine includes a receiving roller platform with a delivery roller platform in alignment with it, a plate carrying saddle between the two platforms, and novel means for moving the saddle to register the plate. Invented by Henry A. Wise Wood, New York. Assigned to Wood Newspaper Machinery Corp., 688 S. 2nd St., Plainfield, N. J. Application July 29, 1937. 16 claims.

Printing Presses and Supplies:

2,199,288. IMPROVED GAUGE PIN to be removably attached to the tympan sheet of a printing press for locating the sheet to be printed. The invention is particularly concerned with improved means for attaching the gauge pin to the tympan sheet. Invented by William A. Hoover, Pittsburgh, Pa. Unassigned. Application April 5, 1939. 5 claims.

2,199,469. PRINTING PRESS WASHING DEVICE including an angularly arranged blade which contacts one of the lowermost rollers of the press to remove the greater amount of the ink solvent used to wash the press and to direct the ink solvent to a collecting trough. In this manner, the invention allows washing of the press without danger of the ink solvent dropping into the press operating mechanism. Invented by Jack L. Seel and Carl M. Mueller, St. Paul, Minn. Assigned to Brown & Bigelow, St. Paul, Minn. Application September 29, 1938. 4 claims.

2,199,812. ROTARY WEB PRINTING PRESS designed for accurate register in the second printing unit, despite shrinking and wrinkling caused in the drying step, the object of the invention being attained by use of impression and form cylinders in the second printing unit of slightly smaller diameter than the corresponding cylinders in the first printing unit. Invented by Howard M. Barber, Pawcatuck, Conn. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Application June 6, 1939. 2 claims.

2,201,452. INKING MECHANISM FOR ROTARY INTAGLIO PRINTING PRESSES having features for maintaining a flowing stream of ink in contact with a large area of the design, for controlling and directing the return flow of the ink stream, and for preventing evaporation from the ink stream. Invented by Willard M. Pollock, Chicago, Ill. Assigned to The Goss Printing Press Co., 1535 S. Paulina St., Chicago, Ill. Application September 11, 1937. 8 claims.

2,201,942. MULTIPLE POINT CONTROL FOR INKING MECHANISM having means whereby a printing press can be put to print $\frac{3}{4}$ or $\frac{1}{2}$ the width of the ordinary web without replacing the inking or other roll of the inking system. Invented by Carl Blomgren, Plainfield, N. J. Assigned to Wood Newspaper Machinery Corp., New York, N. Y. Original application January 30, 1934, divided and this application July 8, 1937. 2 claims.

2,202,020. PRINTING BLANKET composed of a number of layers of double napped textile fabric, each layer having been individually impregnated with a latex solution containing a high percentage of solids. Blankets of this type are claimed to be capable of absorbing and distributing the pressure arising in either rotary press or letterpress work in such manner as to give substantially longer life. Invented by Stephen B. Neiley, Winchester, Mass. Assigned to Dewey and Almy Chemical Co., North Cambridge, Mass. Application December 26, 1935. 3 claims.

2,202,134. WEB PERFECTING ROTARY PRESS having means for handling the several form cylinders, inking mechanism and web-lead by providing an impression cylinder having the diameter equal to more than three times the diameter of each of its form heads. Invented by Howard M. Barber, Pawcatuck, Conn. Assigned to C. B. Cottrell & Sons Co., Westerly, R. I. Application October 4, 1938. 3 claims.

2,202,420. DELIVERY CONTROL FOR PRINTING PRESSES including a counter and automatic means for stopping the press when the desired number of copies have been run off. Invented by Walter E. Hamlin, Cleveland, Ohio. Assigned to The Cleveland Shopping News Co., Hamilton Ave. and E. 53rd St., Cleveland, Ohio. Application November 12, 1936. 4 claims.

2,203,070. DUCTOR ROLLER CONTROL for printing presses having a novel automatic brake to prevent rotation of the ductor roller when free of the ink roller of the press and the fountain roller to assure uniform distribution of ink on the various rollers. Invented by Frank Zablocki, Jamaica, N. Y. Unassigned. Application June 27, 1938. 4 claims.

2,203,706. METHOD AND APPARATUS FOR DETECTING LATERAL ALIGNMENT OF WEBS of paper or the like being passed through a printing press. The detection system operates upon appearance of index patters, which are either part of the normal printed region or specially provided in predetermined abnormal positions. Invented by Donald C. Stockbarger, Belmont, Mass. Assigned to Stockton Profile Gauge Corp., Lowell, Mass. Application May 5, 1937. 19 claims.

2,203,848. INKING ARRANGEMENT FOR PLATEN PRINTING PRESSES employing a smoothing roller rotating in contact with the inking rollers and reciprocated axially relative to the rollers to effect uniform inking and to wipe out marks. The invention is particularly concerned with new means for reciprocating the smoothing roller. Invented by Frank Sydney Thompson, Manchester, Eng. Assigned to T. C. Thompson & Son, Ltd., Manchester, Eng. Application November 2, 1938, in Great Britain, December 1, 1937. 2 claims.

2,204,383. PRINTERS' ROLL made by winding on a partially vulcanized soft rubber core surface a number of layers of a plastic comprising alkyd resin and plastic polymers of chloroprene, vulcanizing in dry heat and, after cool, machining the roller to size. Invented by Moyer M. Safford, Schenectady, N. Y. Assigned to General Electric Co., Schenectady, N. Y. Application October 25, 1935, divided and this application April 8, 1937. 5 claims.

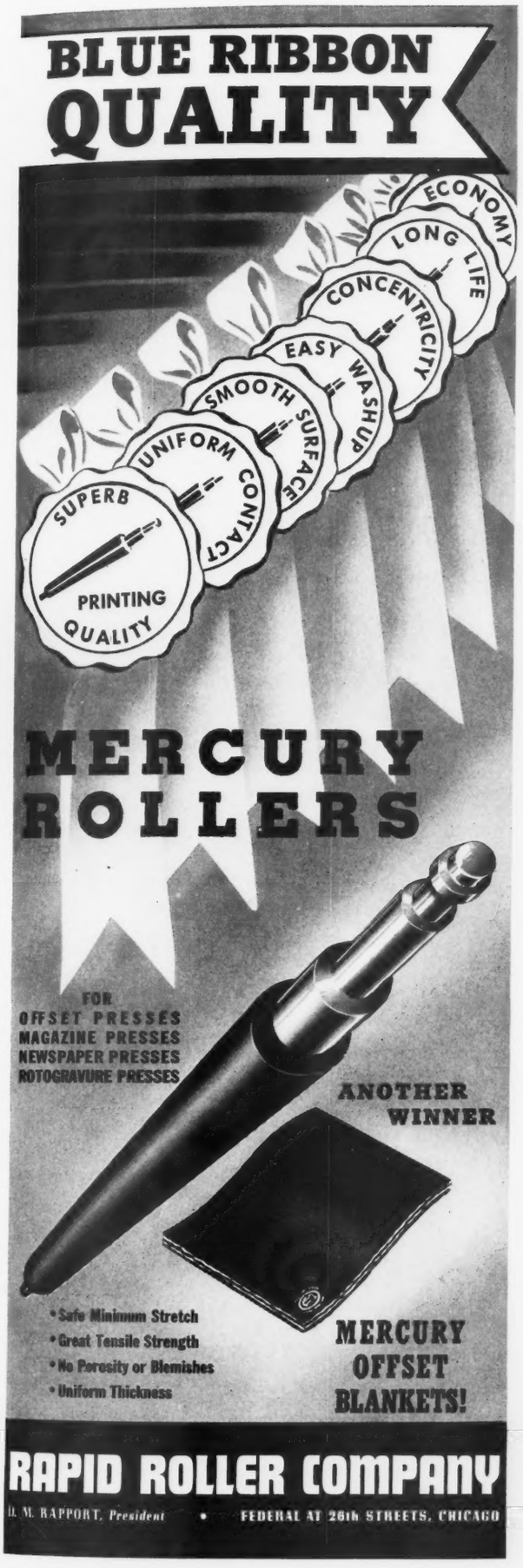
2,205,216. MULTICOLOR PRINTING PRESS for printing two colors in one operation on cards, cardboard or paper of cut sizes. The invention is particularly concerned with a structure for moving the printing head vertically and horizontally, and mechanism for moving the cards in a rectilinear direction. Invented by Joseph F. Loughery, Philadelphia, Pa. Assigned to The Duo Color Printing Press Co., a partnership consisting of Joseph F. Loughery, Max Gettes, and A. K. Brown. Application February 15, 1938. 9 claims.

DESIGN PATENT GRANTED — A design patent, No. 120,694, was granted by the U. S. Patent Office on May 21 to American Type Founders, Inc., covering ATF's new script, Grayda, according to Gerry Powell, typographic director of the company. The name Grayda has likewise been officially registered as a trademark, the application for registration having been accepted as of May 14, 1940.

Cease and Desist Order

On April 25, as the result of an action by American Type Founders, Inc., Judge Holly of the United States District Court, Northern District of Illinois, issued a decree against A. F. Haase, operating as the Haase Type Foundry, Chicago, ordering him to cease and desist from manufacturing a type face similar to ATF's trade marked Lydian and further restraining the Haase Type Foundry from using the name "Lydia" or any similar name to designate a type face. The same results were achieved without court action when, at ATF's request, the M & L Composition and Electrotype Company agreed to refrain from manufacturing a copy of Lydian and to drop the use of the name "Lidyan."

For Patent Research in the U. S. Patent Office, or a prompt estimate on any type of search, address INVENTION, INC., Barrister Bldg., Washington, D.C.



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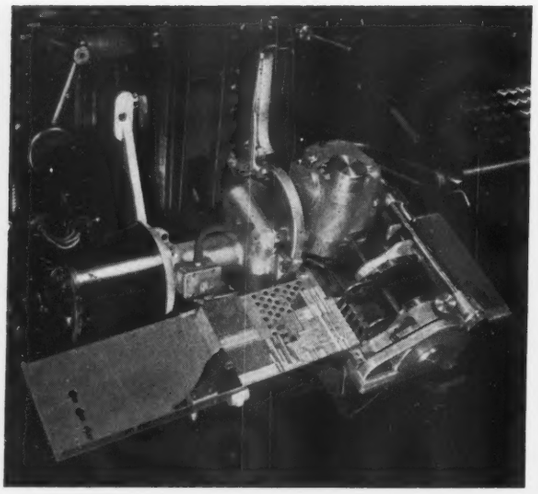

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GOOD FELLOWSHIP

(*Continued from Page 44*)

metal base having a total height of 0.021 in.

Etching Depths

Photo-engraving Superintendent D. D. Curriden of the Minneapolis *Star-Journal*, discussed the question: *What progress has been made and to what extent is the roll-up process being used for etching halftones?* With the roll-up process, Mr. Curriden is obtaining 0.006 in. in the highlights; from 0.005 in. to 0.0055 in. in the middletones, and 0.0035 in. in the shadows. Plates made by the roll-up process stereotype much better and provide greater depth in the middletones and shadows. He gets 0.002 in. on the first bite and from 0.0045 in. to 0.005 in. on the second bite.

Someone wanted to know about the maximum life of cold top enamel. One engraver reported a case where a 13-month-old enamel had worked satisfactorily. Another reported a case where a two-year-old bottle of enamel had been brought out of storage and had been used successfully. It was reported to the meeting that uniformity of temperature control is of greatest importance. From 80 deg. to 110 deg. were recommended as satisfactory temperatures for developer. A thin enamel coating is preferable to a thick coating inasmuch as the thin coating has better working properties, since it gives a quicker printing and developing time and a tougher film. To eliminate the time required for drying a negative in humid weather or for quick printing purposes, a thin sheet of cellophane was recommended. A quick drying varnish made of resin and benzol, also was suggested for use in protecting a wet negative before use of the cellophane to prevent the cellophane from sticking to the film and spoiling it.

In answer to the question: *What causes bubbles under strip-film when it is being squeegeed?* the opinion was given that the human element practically is the universal cause.

Stereotype Meeting

Chairman D. H. Parker of the Montreal (P. Q. Can.) *Star* was assisted by Production Manager F. L. Yeager of the Indianapolis (Ind.) *Star* in conducting the Stereotype meeting which was held in the Drake Hotel Ballroom Monday afternoon.

Color Plate Register

In order to help relieve some of the difficulties stereotyping executives have been having with unregistered color plates and plates provided with register marks outside the printing areas, the stereotype executives' meeting adopted what is commonly known as register mark No. 1 as the standard and passed a resolution requesting platemakers to place the register mark on plates as near the corners as possible but within the printing area of the plate on all newspaper color work. At the correlation meeting Wednesday morning, the resolution was presented, explained and passed unanimously.

It was stated in the report to the general meeting that a number of the 27 questions had been discussed previously in the A. N. P. A. Mechanical Bulletins, and that members should take full advantage of this reference material.

Most stereotypers use several corks on the molding machine; the number, however, is dependent upon the number of pages to be molded.

Air holes under solids or halftones prompted the asking of a question as to how they can be reduced to the minimum. The answer was that the water temperature and the cooling rate of the plate have a direct bearing on the trouble. A water recirculating system is recommended. The trouble can be corrected to some extent by properly deflecting the metal from the nozzle and by properly heating it.

Saws on Automatic Autoplates should be changed weekly irrespective of the number of plates cast. Clips, gates and rings on Autoplates should be cleaned daily.

Pre-Checking Stereo Plates

The question: *How many thousandths of an inch low can portions of the surface of a stereotype plate be and still be a good printing*

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plate, regardless of the type of blankets on the press? started a discussion among stereotype and pressroom executives which strongly indicated that newspaper executives above all else want to produce and print from level plates.

Apparently, those who spoke on the subject are resigned to liberal tolerances in stereotype plate printing surfaces and in blankets. Blanket variations seem to run from 0.011 in. for English felts down to 0.0025 in. for one domestic brand.

A desire was expressed for some way to determine if a stereotype plate can be passed as printable or unprintable before it is sent from the stereotype department to the pressroom. Pressroom Superintendent Auburn Taylor of the Charleston (W. Va.) *Gazette*, asked Stereotype Superintendent George Fuller of the Cleveland *Press*, if he knew of a method for pre-checking the printability of stereotype plates before they were sent to the pressroom. Mr. Fuller replied that he did not know of a method. He did say, however, that himself and many others would appreciate an instrument by which it could be determined if a plate is printable. The only instruments available for this purpose at present are straight edge and micrometer calipers. The latter are used on sections cut from stereotype plates.

Further discussion upon the subject of stereotype plates indicated that rollers which have been set properly by the pressman will "mush" and cause blackening of the open spaces in a plate that has variable printing surface.

J. W. Addison, Pressroom Superintendent of the Hartford (Conn.) *Times*, suggested that sometimes easing off the rollers eliminates blackening of the open spaces in the page. Pressroom Superintendent Walter Ogden of the Cleveland *Press*, immediately took exception by asking: "If you do that, what happens to the solids in the plates? They will print sketchy and gray."

Production Manager Al Lengel of the Oakland (Calif.) *Tribune*, feels that the answer to good printing qualities of a stereotype plate containing open spaces is in the packing of the mat.

Mr. Addison stated that low spacing material causes plate distortion. Higher-level spacing material makes a better plate for the pressroom.

Mr. Fuller discussed adjusting the trimming mechanism on the plate shaver. A solid plate, *i. e.*, one like a page containing want ads, is used to set the shaver to trim the plate with a variation of not more than 0.001 in. or 0.0015 in., but in a plate containing open spaces the open space areas will "give" in the shaver as much as 0.003 in. Mr. Fuller did not agree with Mr. Lengel's observation about mat packing.

Dross Loss Records

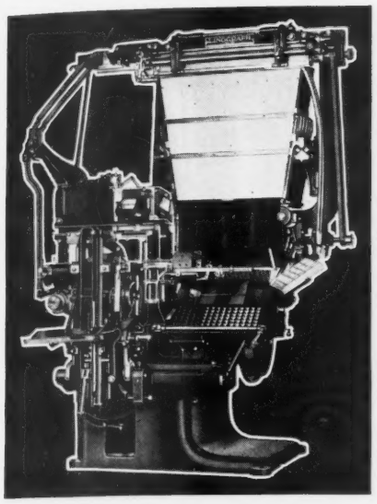
Considerable interest was shown in the question related to the reduction of losses from dross. Stereotype Superintendent George Fuller of the Cleveland *Press*, stated his dross losses had been reduced 60% since he had been keeping dross records. Other stereotype executives spoke of a system for keeping dross records expressed in pounds of dross per pound of metal cast. It was suggested that the Mechanical Department sponsor the idea of publishing comparative dross records to A. N. P. A. member offices.

Cecil B. Welch of the Los Angeles *Times*, D. H. Parker of the Montreal (P. Q., Can.) *Star*; H. D. Rindsberg of the Cincinnati *Enquirer*, Lester Yeager of the Indianapolis *Star*, and Horace H. Parker of the Richmond (Ind.) *Paladium-Item*, all discussed safety measures as practiced in their plants. All of them agreed that safety observance in printing plants is an important thing.

Defective Electros

It is apparent in spite of the standards adopted for making electrotype plates and approved by the A. N. P. A. Mechanical Committee, the A. A. A. A. Committee and the I. A. E. Committee in 1930, that some difficulty is being experienced by stereotype executives with electrotype advertising plates furnished by national advertisers to newspapers. The principal trouble seems to be in the soft metal backing, although some have had trouble with bubbles or blowholes immediately under the copper facing. Production Manager Leon A. Link of the Cleveland *Plain Dealer*; Stereotype Superintendent J. C. Steele of the Louisville *Courier-Journal*; George Fuller, Stereotype Superintendent of the Cleveland *Press*; John Donald, *Journal-American*, New York; Production Manager

GOOD CRAFTSMEN *and* FINE TOOLS



LINOGRAPH "IT'S GOT EVERYTHING!"

MORE VALUE PER INVESTED DOLLAR

Set a top notch operator down at a Linograph "50" keyboard and you've created a combination that's a natural.

As his nimble fingers fly over the responsive keyboard, the entire cycle of machine composition swings into action more smoothly and rapidly than either he or you have ever seen before.

Instantly you are aware that a new standard of machine composition explains the swing toward Linograph. Fewer motions, fewer and more simple adjustments, shorter travel of mats, stop-free distribution, perfect alignment, clean and solid slugs — all are a delight to see and combine to insure real thrills for the operator who, more than anyone, appreciates working with a superb tool such as the Linograph "50".

•

Get acquainted with the modern "50" and your next buy will be a Linograph.

•

[See our factory display or visit one of our installations (names of users on request.) Send for latest Catalog.]

LINOGRAPH CORPORATION
DAVENPORT IOWA

TEAR OUT AND MAIL THIS COUPON

LINOGRAPH CORPORATION
120 Scott St., Davenport, Iowa

Gentlemen: Please send us your complete, illustrated Linograph "50" Catalog.

Name..... By.....
(Title)

City..... State.....

DON'T BUY A TYPE METAL FEEDER FOR YOUR COMPOSING MACHINES

until you know all about

The Price $75

The Jordan CONTINUOUS METAL FEEDER

For the LINOTYPE--INTERTYPE MONOTYPE--LUDLOW--ELROD

Operates efficiently with all types of hanging ingots

Does not require pulling back the chain when attaching new pig; feeds down in exact amount of metal cast whether slugs are light or heavy; pigs can not jam in metal pot or drop suddenly to the bottom of the pot.

This advanced feeder costs no more than outmoded feeders . . .

Write for illustrated descriptive folder

UNITED AMERICAN METALS CORP'N
200 Diamond St., Brooklyn, N.Y. 2246 W. Hubbard St., Chicago, Ill
4101 Curtis Ave., Baltimore, Md. 785 Bryant St., San Francisco, Cal

as fine a type metal as is made
UNITED AMERICAN

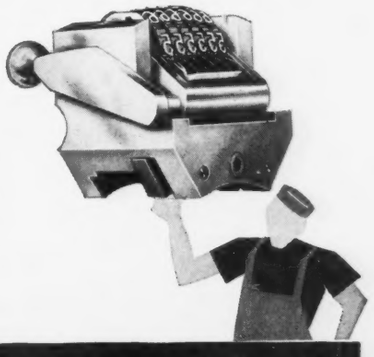
ROTARY PRESSES

Equipped with

WETTER

Number Better

Locking time is reduced and fine adjustment is facilitated by exclusive features of Wetter Rotary Numbering Machines. Interchangeable, too, for right angle or parallel operation. Deeply engraved figures, accurately turned to cylinder sizes, insure better work.



WETTER NUMBERING MACHINE CO.
246 LOGAN STREET, BROOKLYN, NEW YORK

Al Lengel of the Oakland (Calif.) *Tribune*, all spoke of the difficulties encountered with defective plates and means for trying to keep check records, but it developed that in many instances there was not time enough between receipt of plate and publication date in which to ask the advertising agency for a new plate. Upon putting the question by A. N. P. A. Mechanical Committee Chairman Fred Keefe, it was unanimously recommended that steps be taken to bring the 1930 report up-to-date to meet present-day conditions.

Experience operation of vacuum casting boxes as expressed by two stereotype executives show that the boxes reduce the number of defective plates cast. George Fuller of the Cleveland *Press* stated the boxes had reduced defective plates in his plant 22%. Another executive stated his defective plates had been reduced by 95%.

Pressroom Meeting

Mechanical Superintendent A. H. Burns of the New York *Herald-Tribune*, presided at the Pressroom Clinic and was assisted on the platform by Pressroom Superintendent Walter Ogden of the Cleveland *Press* and John J. Shea, General Mechanical Superintendent of the Hearst Newspapers, New York.

Walter Huber, President, J. M. Huber, Inc., was introduced and discussed latest technical phases of the Velo Cold-Set Printing Ink Process as applied to newspapers. An abstract of Mr. Huber's talk appears alsewhere in this issue.

The first question in the list of 23 submitted to the meeting was related to changing the web lead from first to second impression, where equipment permits, to improve the printing of national advertisements or large cuts. A majority of the pressroom executives favored changing the web lead to conform to the makeup of the paper, as it appears to offer a better balanced paper from a general printing standard consideration.

With respect to printing r. o. p. color on the wire or felt sides of the sheet, there seemed to be no preference among those present at the meeting.

Balloon Former Runs

On balloon former press runs, it was the consensus of opinion that there is a necessary reduction in production. Various estimates were given, ranging from 10% to 25%. At the correlation meeting held in the Ballroom Wednesday morning, Production Manager Edwin H. Evers of the St. Louis *Globe-Democrat*, stated there is increased waste when using balloon formers and for that reason he feels that 20% is a nearer average reduction in production.

Blanket Treatment

Atmospheric conditions in the pressroom not supplied with humidity control affect the condition of the press packing. Under extreme humidity conditions some packing will swell. One press blanket manufacturer stated that packing in which asphalt is incorporated will not swell.

Machine or neat's foot oil was advised as a dressing for press blankets, to be applied once a week. William F. Grenier of the New England Newspaper Supply Co., advised in the case of pyroxylin coated blankets that a mixture of castor oil be used, rather than kerosene, gasoline or machine oil, because the castor oil replaces the original emollient in the blanket. Regarding the thickness of press blankets, manufacturers report tolerances ranging from 0.002 in. to 0.005 in.

To improve the printing of solids and obtain sharpness of print on high speed presses, it was recommended that the number of distributing rollers be increased. The cause of defective print on high speed presses seems to be ink distribution.

Plate Underlays

Several pressroom executives stated that since vacuum casting boxes had been installed in their plants, they are doing little or no underlaying of plates on the press. One Rochester executive stated that on a recent Saturday paper only one underlay was used on the entire press. The consensus of opinion was that the majority of pressmen underlay plates when necessary. Auburn Taylor, Pressroom Superintendent of the Charleston (W. Va.) *Gazette*, however, asserted in the correlation meeting that he never

THE PAPER THAT GETS IN THE CRUCIAL LAST INNING

. . . is the paper that the fans all reach for . . . To crown eighth inning hopes with ninth inning certainty, and still make schedule, means quick molding, quick scorching and a first plate good enough to go right to the press . . . all recognized Certified qualities.

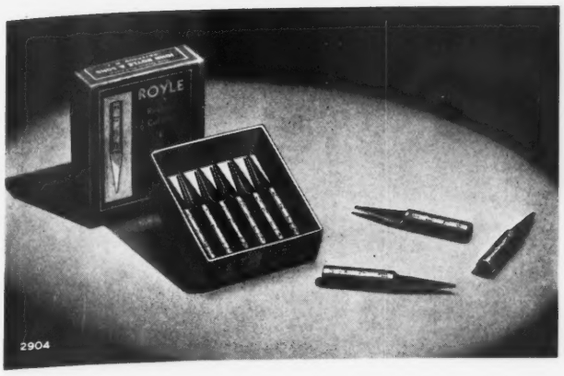
Papers harassed by rivals that get out sooner with later news are eagerly ferreting out sources of delay and applying remedies. Often a change to Certified saves the precious interval that counts so much.

For dependable stereotyping, rely on Certified Mats, made in the U. S. A.

CERTIFIED DRY MAT CORPORATION
9 Rockefeller Plaza, Dept. M **New York, N. Y.**

Certified
DRY MATS

LUBRICATED FOR LIFE
LARGE OR SMALL
There is a PULSOLATOR system for automatically lubricating every type and size of printing press.
Customers write that Pulsolator
"Increases press productive time 3.3%"
and
"Reduces oil consumption 60%"
At your request our engineer will call and demonstrate how Pulsolator obtains these savings.
Write for Bulletin B-30
RIVETT LATHE & GRINDER INC.
Brighton, Boston, Mass.
Automatic oil lubrication
BLANCHARD PULSOLATOR



ROUTING CUTTERS THAT CUT!!

Choose Style According to Use

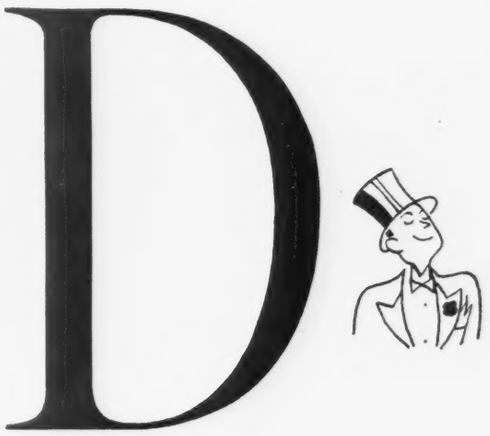
Styles	*Blade Sections*	*Recommended for*
A		Electrotypes, stereotypes, wood
B		Zinc
C		Brass
D		Electrotypes and copper
E		Copper (Steel at reduced speed)
F		Zinc (Reinforced blade)
G		Brass (Reinforced blade)
H		Copper (Ground below center)
L		Zinc (Long blade)
M		Wood veining (No taper)

All Royle Routing Cutters reflect advantages gained through more than eighty years' experience in making these tools. We promise no miracles, but offer a complete line of cutters in every respect the finest that sound design, fine material and expert workmanship can produce. . . . .

Write for catalogue 425

JOHN ROYLE & SONS

8 ESSEX STREET PATERSON, N. J.



. . . stands for Distinction
Which KIMBLES have earned
Through years of performance
With substitutes spurned.

Motors by KIMBLE

Distributed by AMERICAN TYPE FOUNDERS

Branches and Sales Agents in 25 Cities

FEATURES FOR ALL

NEWSPAPERS • TYPOGRAPHERS • TRADE COMPOSITORS • PUBLICATION PLANTS and COMMERCIAL PRINTERS of all varieties

These recently installed

C & G MODEL 3-A SAW TRIMMERS

The McCall Corporation
Dayton, Ohio
Warwick Typographers
St. Louis, Missouri
Philadelphia Inquirer
Philadelphia, Pa.
Rand McNally Company
Chicago, Illinois
Edwin H. Stuart, Inc.
Pittsburgh, Pa.
Times Picayune
New Orleans, La.
Roto-Color, Inc.
St. Charles, Illinois
Buffalo Evening News
Buffalo, New York
The Egry Register Co.
Dayton, Ohio
Columbus Dispatch
Columbus, Ohio

Write for list of users in your neighborhood

Milwaukee Saw Trimmer Corp.

612 East Clybourn Street Milwaukee, Wisconsin

underlays a stereotype plate but does sometimes request a new plate from the stereotyper. He described an incident in his plant when he took off a blanket from one of his units and returned it to the manufacturer with the complaint that the blanket printed with a grain in the solids. He said the blanket manufacturer identified the exact places where the plates had been underlaid by the appearance of the blanket. The manufacturer had no knowledge that the plates had been underlaid.

TUESDAY MORNING

Type Metal Investigation

At the Tuesday morning session of the Conference, Chairman Fred H. Keefe introduced Ralph H. Braden, Professor of Chemistry at the Rochester (N. Y.) Anthanaeum and Mechanics Institute. Through Dr. Mark Ellingson, President, the Institute offered its services in a research capacity at the Philadelphia A. N. P. A. Mechanical Conference in 1939. Men prominent in the industry, however, over a three-year period, have suggested to President Ellingson that there is a need for chemical investigation and research in printing. Professor Braden, in addressing the Chicago Conference, spoke on the subject *Facts About Type Metals that Metal Users Should Know*.

Professor Braden's paper dealt mostly with the need for investigational work on printing metals, specified the exact subjects to be investigated, discussed the peculiarly adaptable facilities of the Institute for this kind of work, and gave the results of preliminary work in listing available literature on the subject and discussed the limited amount of investigational work already accomplished.

One thought expressed by the speaker might clear up the confusion sometimes existing in the lay mind with respect to virgin metals and those which have been obtained from dross. Said he:

"It seems to me in order to avoid confusion the manufacturers should agree on the use of certain definite words to indicate the source of their metal. I believe a much better word than virgin is 'primary' when referring to metals which came directly from the smelter using the earth ores. Some metal men used the words 'new' in place of virgin but the use of this word will be confusing. Metals which come from scrap tin, scrap lead or scrap antimony and from type metal dross should be termed "secondary metals. Primary metals that contain impurities which if not removed in the manufacturing process of making type metal, will render it entirely unfit for use as linotype or stereotype metal. On the other hand, metal obtained from dross which is properly refined should be just as valuable for type metal as primary metals. In some cases the secondary metals are even superior to the primary metals if the primary metals are not properly treated to remove impurities. At the present time the real problem in the manufacture of type metal, seems to me to consist in either using pure raw materials or in the removal of impurities from the raw impure metal used whether it is primary or secondary."

Problems of Smaller Newspapers

Fred Schaub, Business Manager of the Decatur (Ill.) *Herald and Review*, served as chairman of the meeting for smaller newspapers immediately following the talk given by Professor Braden.

Some of the questions scheduled for this meeting were provocative of considerable discussion, especially the ones related to composing room work flow.

Directed layout and makeup on a small paper over the old system of the composing room laying out the paper seemed to be considered advantageous. A. W. Oliver of the Fargo (N. D.) *Forum*, thinks a directed layout improves the efficiency of the composing room at no extra cost.

Copycutters

Whether copy cutters are necessary on small papers precipitated animated discussion. T. J. Jude of the Racine (Wis.) *Journal-Times*, stated that since the installation of a Model 30 Linotype, the operator receives and handles all copy; sets all the heads; places the heads with the copy; runs out the copy and watches copy flow. Mr. Jude asserted the operator can manage "bottlenecks." After working the system for a while, the time of one machine was eliminated. Mr. Jude stated he supervised a 12 machine plant; 10 of the machines work on news most of the day; two work on ads, with one working ads part time.

George W. Holloway of the Easton (Pa.) *Express* said that whether or not a copy cutter is necessary is dependent upon the size of the plant. He stated that the installation of a copy cutter in the Easton *Express* composing room has greatly assisted in stopping all leaks in news production and as a result makeup men were reduced from 4 to 2 men. The *Express* is a 16 machine plant and the average number of pages printed is 26. Installation of a man to handle the copy provided for the copy to have better attention and handling besides relieving the foreman for other necessary duties.

F. E. Marengo of the Port Huron (Mich.) *Times-Herald*, operates a plant of 10 machines. The copy is handled by one of the two makeup men; a boy delivers the copy; deadlines are in effect for all kinds of copy. Sixteen pages average per day are published. One of the makeup men is a combination makeup and machine man. On his paper, the bulk of the ad copy is in the plant at 6 o'clock day before publication. Food store copy is sent to the plant by 6 o'clock of the previous day. Corrections may be made until 11 o'clock day of publication.

Newsprint Waste

At this juncture, the chairman requested Manager W. E. Wines of the A. N. P. A. Mechanical Department to discuss newsprint waste reduction. Mr. Wines made a report which revealed impressive savings to 75% of the A. N. P. A. member newspapers reporting to the Mechanical Department. Of the members reporting, 50% represent papers of 50,000 daily circulation or less. As compared with 1927 conditions when waste records were first inaugurated, the 1939 savings to members is in excess of $1,000,000. Concluded the manager: "No office, no matter how small, can afford not to keep newsprint waste records."

G. A. Disher of the Southam Newspapers, Montreal, Quebec, paid tribute to the utility of the newsprint waste records furnished by the Mechanical Department. A. W. Oliver of the Fargo (N. D.) *Forum*, stated the smaller newspapers are newsprint waste conscious. As the result of going to a 12 pica column, his firm will save $5000 per year in newsprint. Guy V. Sonneborn of the Lansing (Mich.) *State Journal*, thinks that where there is no competitive newspaper the reduction in the necessity for haste in getting out editions reduces waste and makes for more careful handling of the work. The pressmen take more time to stop the press, change a roll and don't get away to full speed so quickly.

WEDNESDAY AFTERNOON

Production Manager John Park of the Chicago *Tribune*, assisted by Tennant Bryan of the Richmond (Va.) *News-Leader*, presided at the Wednesday afternoon Color Printing, Rotogravure and Offset session.

Roto Ink Standardization

Chairman G. B. Dearnley of the Mechanical Production Committee,

NEW JOGGER FOR MIEHLE VERTICAL

Price is so low you can't afford to be without it . . . Pays for itself in 30 days. Write for descriptive circular.

CHICAGO PRINTERS MACHINERY WORKS
609 West Lake Street, Chicago, Illinois

The dependable makeready protection of CROMWELL TYMPAN
helps you produce
better looking printing at bigger profits

Order today from your local distributor

THE CROMWELL PAPER CO.
4801-29 S. WHIPPLE STREET . . . . . CHICAGO, ILL.

American Association of Advertising Agencies, discussed *Standardization of Shades of Rotogravure Inks*. Most of the newspapers to whom questionnaires had been sent, favored the adoption of the dark mahogany brown color of ink for monogravure printing. The meeting, however, at the conclusion of Mr. Dearnley's report, did not take action on the adoption of the suggested standardization.

In making the report, Mr. Dearnley said: "We realize that the uniformity of the ink does not necessarily mean uniformity of printing, but the uniformity of ink should help all of us towards a greater standardization. If we know that the ink is uniform after issue, we believe in time it will be possible to decrease either the density of prints or adjust etching so that eventually we will really make progress towards more uniformity, and advertisers can look forward to getting increased value out of money spent for rotogravure advertising."

"*Offset Knocking on Newspaper Publisher's Door*"

In concluding his address before the Wednesday afternoon general session, Clarence W. Dickinson of R. Hoe & Company's Offset Division, who spoke upon the subject *Capitalizing Offset*, stated: "The offset press has revolutionized the lithograph business, it is revolutionizing the letterpress printing business. It is gaining a foothold in the magazine publishing field. It is now knocking on the door of the newspaper publisher and I am inclined to the belief that it will not be long before that door will be opened with a welcome."

"In the graphic arts, offset is the bane of the printer and publisher while at the same time it has proved to be the boone of the lithographer. . . . It is a boone to him, for without it lithography in 1940 would still be produced in the clumsy manner and at the snail's pace that prevailed fifty years ago.

"When thoroughly understood and properly operated by competent workmen, offset-lithography is the simplest and cheapest method of getting ink mechanically on paper in the great majority of cases. Under these conditions, no press will produce the work better and only one printing machine — the high-speed modern newspaper press—will produce it any faster."

As an indication of the trend in the development of web perfecting offset presses, the speaker discussed a press now used in Canada for the production of a mail order catalog. "In Cincinnati," said he, "is another web perfecting offset press, installed in the plant of a printer who operates a number of letterpress magazine and newspaper rotaries. This web offset press, equipped with a newspaper folder produces a weekly denominational publication with a national circulation in one and two colors."

"Several small weekly newspapers and a few small dailies are being produced on small 2-page-wide web presses with folders attached," said the speaker. He admitted that some of the work is abominable; no worse, however, than some of the work produced on the first sheet-fed offset presses. "Some of the work compares favorably with the average newspaper press stereotype quality and some of it is above the average," he continued.

The speaker discussed the Hoe four-color web perfecting offset newspaper press now in operation in the plant of the Trenton (N. J.) *Times*,[1] which is capable of printing two 8-page signatures or one 16-page signature in any combination from one to four colors simultaneously on both sides of the web. The press has a speed of 12,500 cyl. rev. per hr., will take a 68¼ in. web and has a 23⅜ in. cutoff. It is the trail blazer for the injection of the offset process into the newspaper field.

Mr. Dickinson asserted "Definitely, there is a place for the large web perfecting offset press in the newspaper plant of reasonable size. To make such an investment profitable, the publisher and his production manager should not for the moment think of the installation in terms of the late news sections of the paper. I suggest you give serious thought to those pages where more time is avail-

[1]See article *Offset at the Trenton* (N. J.) Times *Plant*, p. 36, June 1940, issue of *Printing Equipment Engineer*.

DUPLEX PRESSES

Semi-Cylindrical • Unitubular
Tubular • High Speed Flat Bed
Flat Bed • Stereo Machinery

The Duplex Printing Press Co.
Battle Creek, Mich.

ROSBACK

Rotary Round Hole and Slot Hole Perforators, Hi-Pro Paper Drill, Gang Stitchers, and Vertical Perforators and Punching Machines.

F. P. ROSBACK COMPANY
Largest Perforator Factory in the World
BENTON HARBOR, MICHIGAN

EASTERN NEWSPAPER SUPPLY

"FLECTO" GUMMED BACKING FELT — CUT STRIPS OR SHEETS
"PLATE-TAK" — DOUBLE FACED ADHESIVE TAPE FOR MOUNTING CUTS

CORK MOLDING BLANKETS
MOLDING BOARDS & CREEPERS
DIRECT PRESSURE FELTS
SUPERIOR CASTING BOARDS
STEEL POURING SHEETS
AUTOPLATE BELTS
ROUTER BITS & BELTS
MALLETS & PLANES
CHISELS & JIG SAWS

Write for New General Catalog Today!

EASTERN NEWSPAPER SUPPLY — 9603 NORTHERN BLVD., CORONA, N. Y.

able for preparation and pass by for the moment those pages where the last copy is 'railroaded' through just before the bell rings." He mentioned the suitability of the offset process for producing comic sections and in the production of feature and special sections of Sunday editions.

Reproduction Proofs on Glassine

James H. Gregory of American Type Founders who followed Mr. Dickinson in addressing the meeting, described the development of offset among small weekly papers. At the present time 16 small weekly papers, 1 weekly supplement and 2 daily newspapers are being printed offset. His talk was concerned mostly with the use of offset by the smaller papers. He enumerated the advantages of offset, among which were rising production costs by other methods, less production costs by offset; offset will enable the publisher in the smaller community to survive metropolitan paper competition on account of the possible liberal use of pictures of local people, buildings and social events. He said that the offset printing method is being used by publishers who could not afford a one-man engraving plant. The speaker asserted that offset creates jobs because so far it has been going into town where no newspaper existed before. At some length he described the Hartford (Conn.) *Newsdaily*[2] which started recently and stated that its publisher claims 25% less production cost than letterpress. A recent innovation in production at the Hartford *Newsdaily* is the use of glassine upon which the reproduction proofs are taken. The speaker asserted that a sufficient quantity of the glassine could be purchased for $7 to last 100 days. The Hartford paper is using 133 line screen in its illustrations.

Perfumed Ink Printing

The technique of printing with perfumed inks also came up. Chairman Park stated that the *Tribune* had printed a number of perfumed ink advertisements. He explained that the area to be printed in the advertisement with perfumed ink determines whether the percentage of perfume to ink shall be 2%, 4% or 5%. Mr. Park stated that the essential oils are incorporated in perfumed ink in the *Tribune* plant. Perfume which will last for a time after the papers get out of the pressroom are used.

Production Manager Lester Yeager of the Indianapolis *Star*, discussed his experience with perfumed ink which started with publication of a perfumed ink advertisement last fall. Mr. Yeager stated that in his case the ink must be adapted to the perfume. Recently an advertisement carrying apple blossom perfume was printed in the *Star*. He considered this a "real job" because the perfume was fugitive in nature. When an advertiser specifies a certain odor, a sample of the ink is tested by smearing a streak on newsprint which is then placed in a desk drawer for 24 hours. He suggested mixing the essential oils with mineral oil which is odorless. In this way one doesn't have to use so much oil to overcome the smell of the oil in the perfume mix.

Harry Zerbe, Pressroom Superintendent of the Lawrence (Mass.) *Eagle-Tribune*; Bernard F. Garrity, Mechanical Superintendent of the Hartford (Conn.) *Times*, and Eugene Jagareski, Mechanical Superintendent of the Albany (N.Y.) *Knickerbocker News*, described their experiences in printing perfumed advertisements.[3]

[2]See illustrated layout showing mechanical operations of the Hartford *Newsdaily*, pages 16-17, May 1940 issue of *Printing Equipment Engineer*.

[3]See page 74, June issue of *Printing Equipment Engineer* for article entitled *Lilac Odor in r.o.p. Color Advertisement* at Cleveland *News* and the article entitled *Perfumed Ink Printing*. See also article entitled *Perfumed Color Ad* on page 24, April 1940 issue.

GENERAL REPAIR OF LINOTYPE AND INTERTYPE MOLDS (ANY KIND, ANY SIZE). PARTS, ETC., SINCE 1912
Makers of Reid Magazine Racks, Etc.
WILLIAM REID & CO., 2271 Clybourn Ave., Chicago, Ill.

KLEAN-O-MAT
PROCESS
Quick, Efficient, Safe, Machine Method of Cleaning Matrices in the Magazines.
Write
KLEAN-O-MAT CORP.
60 East 42nd St. New York

SAFETY · RELIABILITY · ECONOMY
CLINE
PRESS DRIVES and CONTROL Reels, Tensions and Pasters...
CLINE SYSTEM
CLINE ELEC. MFG. CO.
Chicago: 211 West Wacker Drive
New York: 220 East 42nd Street
San Francisco: 1st Nat'l Bank Bldg

Handle Benzine Safely • Reduce Waste Hazards

with JUSTRITE SAFETY CANS • with JUSTRITE WASTE CANS

Approved and Labeled by Underwriters' Laboratories, Inc.

Sizes: 1 Pt. to 1 Gal. and 2, 3, 5 Gal. Sizes: 6, 8, 10, 14, 25 Gal. with foot lever

JUSTRITE MANUFACTURING COMPANY, 2093 Southport Avenue, Chicago, Illinois

A CLEAN Plant is a PROFITABLE Plant

Keep your Plant clean with BREUER'S BALL BEARING

TORNADO

CONVERTIBLE ELECTRIC **BLOWER** Cleans EVERYTHING

Blows dust and dirt out of motors and machinery. Quickly convertible into suction cleaner for type cases, storage bins, floors, walls, etc. Sprays paint and insecticide. Hundreds of uses.

BREUER ELECTRIC MFG. CO.

5114 N. Ravenswood Ave. CHICAGO, ILL.

TAKE THE DUST OUT OF INDUSTRY with BREUER'S BALL BEARING TORNADO PORTABLE ELECTRIC BLOWER

Write for information and FREE TRIAL OFFER

STOP OFFSET

Get your free copy of this new bulletin—"10 Ways to Avoid Offset." Valuable—practical—shows how to save money—improve presswork.

E. J. KELLY CO. 1807 No. Pitcher Street

FREE

HIGH GRADE BLACKS AND PROCESS COLORS

WILLIAM C. HERRICK INK CO.

330 West 34 St., New York, N.Y.

CRAFTSMEN EVERYWHERE USE

"Items of Economy"

MAY WE SERVE YOU, TOO?

Everything for the print shop, from the office to the shipping room . . .

ECONOMY PRINTERS PRODUCTS COMPANY

609 S. LA SALLE CHICAGO — WABASH 2776 ILLINOIS

SAVE *on* **STEEL FURNITURE**

by buying your galleys, tables, and cabinets at the Angle Steel Stool Company.

• If you are paying high prices, give us a trial. We build what you want, to your own specifications, at lower prices. Send for prices and details on —

• New mat packing table.
• Linotype chairs and stands.
• Galleys. • Cabinets.

Write today

No. 15-19 Linotype Operator's Chair

ANGLE STEEL STOOL COMPANY

127 OAK STREET PLAINWELL, MICHIGAN

NEW-PRESS GEAR LUBRICANT

Approved by GOSS

• Lasts *twice* as long
• Clings at highest speeds
• *More* protection—*less* maintenance

FREE! LIBERAL SAMPLE Send Name and Address

SOVEREIGN PRESS GEAR LUBRICANT

SOVEREIGN OIL CO., 765 Oakwood Blvd., Chicago

ATTENTION STEREOTYPERS

Hundreds of stereotypers are getting perfect molding and stereotype mats through the use of **Franklin Apex Combination Molder** and the **Franklin Klean-print Molding Blanket.** Write today and let us send you samples and complete information on these products.

RUSSELL PRODUCTS COMPANY

702 Harrison Building, 15th and Market Sts. Philadelphia, Pa.

Circular on New Cabinet Model

FREE *Rouse* **BAND SAW**

See the No. 2 Rouse Band Saw for smaller plants.

H. B. ROUSE & CO.

2216 N. Wayne Ave., Chicago, Ill.

NEW MAGAZINES PAY FOR THEMSELVES

through increased production and, time saved. A down payment of only $16.50 and $7.50 per month all that need be paid. Combination duralumin and brass—light yet rugged. Sent on trial if desired. For Linotypes Nos. 5, 8, 14, etc. • Ask for new 108-page catalog of other bargains. We buy, sell, trade in new, used and rebuilt Linotype and Intertype parts and accessories. Tell us of your surplus equipment.

MONTGOMERY & BACON

Towanda • • Pennsylvania

A New Kind of

PRINTING EDUCATION

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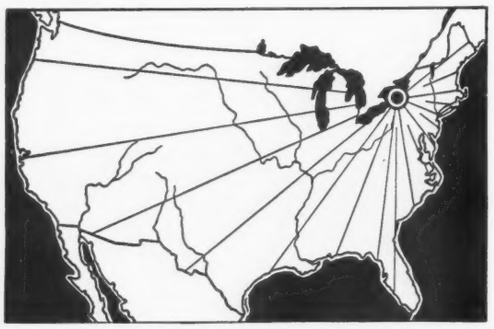

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1276 West Third Street, Cleveland, Ohio

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Pressroom

1 NUMBERING MACHINES — Wetter Numbering Machine Company wants to send you full details and description of its machines for use on Rotary and flat bed presses. Circle this number on the coupon.

2 PAPER — "To get the most out of your printing, investigate Champion Paper, the foundation for good printing." Champion Paper & Fibre Co. offers information on its complete line of papers. Gratis.

3 OFFSET PRESS — "To produce the best in Offset, you must have modern equipment." Harris-Seybold-Potter Co. offers interesting reading matter on its press — also information on Harris Litho chemicals.

4 INK — "Zephyr Blacks, for flatbed presses, are favorites across the nation. Drying speed is amazing." Sinclair & Valentine offers descriptive folder. Send for it.

5 PRESS — ATF "Little Giant" press sheet and details on this press will be mailed to you. Just circle this number on the post-card.

6 DUPLICATION PROCESS — Quality Engraving & Electrotype Co. offers details on "method of making 10, 20 or 30 duplicate plates — locked and in perfect register."

7 COLD SET INK — J. M. Huber, Inc., offers to send you specimens of Velo Cold Set rotary press printing. Check up on this revolutionary new ink. No obligation.

8 TWO - COLOR ROTARY PRESS — C. B. Cottrell & Sons Company will send you a booklet printed without makeready describing this press. Send for it. Use the coupon.

9 HOE offers data on its pasters, folders, reels and tensions. Circle this number on the coupon to get latest information on Hoe equipment.

10 LUBRICATION — "There is a Blanchard Pulsator System for lubricating every type and size of printing press." Bulletin B-30 will be mailed to you promptly.

11 INKS — Use the post-card to get color chart and selector of Flint inks. Offered by the Howard Flint Ink Company.

12 PRINTING PRESS BLANKETS — Tingue, Brown & Company enumerate the various kinds of press blankets supplied by them. Prices and samples will be sent to you. No obligation.

13 INKS — This number circled on post-card brings you gratis an ink 'Colorator' covering George H. Morrill Commercial inks. Send for it.

14 NEW PRESS — Free Bulletin is offered by the Miehle Printing Press Company. Describes the features of the improved V-50 Miehle Vertical. Send for it.

15 INKS — International Printing Ink Corp. will be glad to mail interesting data on its complete line of commercial inks. Circle this number on the coupon.

16 ROLLERS — Rapid Roller Company wants to send you specifications, etc. on "Mercury Rollers." Just fill out the postage-paid return card and mail. We do the rest.

17 PRESSES — Let The Meisel Press Company give you facts on its line of presses. Make use of this opportunity to get technical information on equipment.

18 PRESS — Brandtjen-Kluge offers interesting booklet which explains in detail the "Rigid Impression" of the Kluge Automatic Press.

Composing Room

19 COMPOSING ROOM SAW — New Hammond Mercury "has what it takes." Hammond also features popular priced Bench Mercury. Coupon brings you free complete literature. Learn more about these saws.

20 PROOF PRESS — Vandercook & Sons will be glad to send you details on its new and rebuilt proof presses. No obligation, just fill out the coupon and mail.

21 LINOGRAPH '50' gives more value per invested dollar, states the Linograph Corporation. This number circled on postage paid return card brings you, gratis, Linograph catalog.

22 REPLACEMENT PARTS for Linotypes and Intertypes. Use the postage-paid return card to get free catalog of parts, material and repairs. Offered by Montgomery and Bacon.

23 SAW — "1100 plants have discovered that the Glider obsoletes all others — cuts sawing time one-third." Hammond Machinery offers full description and prices in interesting booklet. Send for it. Just circle this number on the post-card.

24 METAL FEEDER — "The Jordan continuous feeder has many exclusive features." United American Metals Corp. will be glad to send you interesting data. Learn more about this feeder.

PLEASE FILL OUT THIS CARD CAREFULLY

PRINTING EQUIPMENT Engineer — July
1276 West Third Street, Cleveland, Ohio.

Without obligation please have the manufacturers send me literature or information circled below. (These numbers correspond to numbers on descriptive paragraphs).

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36
37 38 39 40 41 42 43 44 45 46 47 48

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FIRM NAME .....

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25 CUT CEMENT—"Booth's Zink Cut Cement holds with the grip of a Tiger's paw — saves time in the composing room." Let the E. A. Booth Rubber Company send you full information. Circle this number on the coupon.

26 DETAILS AND SPECIMENS of Ludlow typefaces will gladly be sent you by The Ludlow Typograph Company. Learn more about Ludlow equipment.

27 DETAILS on New Universal Intertype are offered by the Intertype Corporation. Check up on this new typesetting machine. No obligation, just fill out the card.

28 SAW TRIMMER—"C&G Saw Trimmers increase production and reduce costs materially." Milwaukee Saw Trimmer Corporation this month offers to mail you illustrated literature. Use the postage-paid return card.

29 MOTOR & ROUTER — Cushman Electric Co. will send illustrated booklet showing features of its Offset Motors for Linotype and Intertype drives. Circle this number on the coupon.

30 MOLD COOLER—Linotype Parts Company this month offers a detailed circular on its Model B Blower. Check the features of this equipment for Linotype and Intertype.

31 SLUG CORRECTOR—"Automatically Trims Shoulder, square ends, saws to measure, trims ribbed side parallel to smooth side." Use the post-card to get full details on this new machine. Offered by The Curle Manufacturing Co. No obligation.

32 TYPE METAL—Imperial Type Metal Company this month offers interesting facts on its "Plus Plan". Send for booklet.

33 FURNITURE AND CABINETS —Use the coupon to get free copy of Hamilton's printing equipment catalog No. 22. No obligation.

Stereotype Dept.

34 STEREOTYPE SUPPLIES — Eastern Newspaper Supply offers to send you latest complete catalog of supplies. Learn more about "Flecto" Gummed backing felt, "Plate-Tak" Cut Mounting Tape, and "Tru-Mold" Cork Molding Blanket. Gratis.

35 DRY MAT — Burgess states, "The ability of the stereotyper shows to best advantage when he uses Burgess Chrome Mats." Circle this number on the coupon to get samples and booklet describing Burgess Mats.

36 CATALOG of supplies for the printer will be mailed to you by American Publishers Supply. Contains many useful products used daily in stereotype departments. Coupon brings it to you.

37 DRY MATS — Wood Flong offers sample lot of its dry mats. "Wood Mats give white highlights—solid blacks—true halftones and middletones — deep molds — clean plates."

38 MASTER FORMER —"Mechanize your dry mat shrinkage with automatic Vacuum control." Sta-Hi Corporation offers to mail you booklet describing the Sta-Hi Master Former. Coupon brings it to you.

39 MAT CASTER — "For better plates and faster casting, investigate the Hammond Easykaster "8", equipped with or without 800 pound valve-controlled melting pot." Literature, prices and terms offered by Hammond Machinery Builders, Inc. No obligation, just fill out the coupon.

40 DRY MAT — Circle this number on the coupon to receive booklet entitled, "How to get the most from your dry mat and stereo expenditures." Offered by Certified Dry Mat Corp.

Miscellaneous

41 PRINTING EQUIPMENT MOTORS — Kimble Electric describes the modern design of its motors, built especially for the printer, in a booklet which will be mailed to you without obligation. Coupon brings it.

42 ZINC — "Dependable plates mean better engravings and more work for letterpress." Atlantic Zinc Works will send you booklet entitled "Getting Down To Zinc Facts."

43 RUBBER PLATE - MAKING EQUIPMENT — Interested in receiving literature on this subject? Several reputable manufacturers will be glad to mail you facts and interesting information. Circle this number on the coupon. No obligation to you.

44 TRIMMING KNIVES — "A high standard quality knife insures your getting full value out of your trimmer." Simonds Worden White Company offers full details in its knives. Fill out coupon and mail.

45 PAPER CUTTER—"Easy operation, simple, positive adjustments." Let Challenge Machinery send you full details and prices of the Challenge Lever Paper Cutter.

46 IMAGE REVERSER—Use the post-card to get details on the Huebner Straight Line Image reverser for direct color separation, half tone and line negatives. "Eliminates prisms, turn table cameras, stripping of film."

47 KNIFE GRINDER — Seybold Machine Company announces a new "precision knife grinder to grind any straight edge knife." Further data offered. Circle this number on the post-card.

48 ROUTER CUTTERS — John Royle & Sons offers to mail you information on its complete line of Chromium Tungsten steel cutters. Use the coupon.

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